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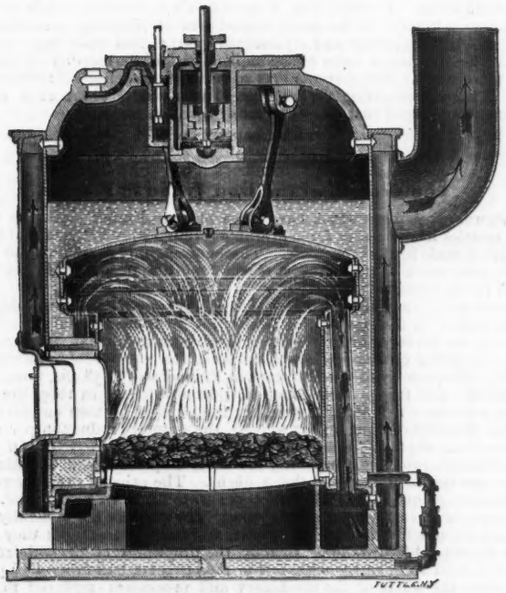
The Fair of the American Institute.

THE fairs of the American Institute are doing an excellent work, by bringing before the public the best machinery and manufactures, and by enabling manufacturers to study the progress made by their rivals. In general, the most enterprising in every class of manufacture, those who exhibit and advertise are those whose wares are of the latest and most improved type, so that the mere fact of having a machine on exhibition is *prima facie* evidence of its excellence. There is abundant proof in the machinery now on exhibition on Sixty-third street to justify these remarks.

We have already noticed the *Air Compressors*, exhibited by the Compressed Air Power Company. We shall now review some of the other machinery, of interest to our readers.

THE BAXTER STEAM ENGINE, manufactured by Colt's Fire Arms Manufacturing Company, Hartford, has already been described in our columns, but we cannot refrain from again noticing so excellent and economical a motor. The accompanying sectional view shows very clearly the arrangement of the parts. We



SECTIONAL VIEW OF THE BAXTER STEAM ENGINE.

note particularly that the combustion chamber is very large and is completely surrounded, except at the furnace door, by water. The heated products of combustion go down, and then up, through a series of tubes, which are surrounded by water; in all these respects the maximum amount of heat is utilized. The heated surface being all covered with water, there is no tendency to burn out the boiler. The cylinder is placed directly in the boiler, which forms the most perfect steam jacket possible; the circulation of water is perfect, keeping the heating surfaces clean, and we are not surprised, therefore, that the Baxter shows such remarkable economy in the generation and use of steam.

The mechanical construction of this little engine is worthy of all praise. The several parts are made by special machines, and to gauge, so that each engine is an exact counterpart of every other of the same size, and duplicate parts will always fit without labor or adjustment, while the moving parts are provided with means to take up lost motion resulting from wear. The boiler is provided with a fusible plug in the crown sheet, so that the chance of explosion from superheating is avoided, and there is no more danger from fire in its use than from any common stove; insurance companies admit this, and consequently make no extra charge for the use of these engines. The following are the dimensions and cost of some of the sizes made:

Horse Power.	Size of Cylinder.	Size of Pulley.	Size of Fly Wheel.	Revolutions.	Floor Space.	Height over all.	Total Weight.	Price, complete, in Hartford.
Two (2),	3X4 in.	9X4 in.	18x3½ in.	300	2½ feet.	5½ feet,	1280 lb.	$400
Five (5),	5X5 "	14X6½ in.	24X5 "	240	3½ "	7½ "	3000 "	800
Ten (10),	7X7 "	20X8½ "	30X6½ "	170	4½ "	9 "	4850 "	1200

There are over 1,000 of these engines now in use, which is a conclusive proof of their value, while the fact that, during the five or six years they have been running, they have caused no accident to life, limb, or property, is evidence of their safety in every respect. Each engine is guaranteed to run above the rated power.

DUCKHAM'S HYDROSTATIC WEIGHING MACHINE AND DYNAMOMETER. THOMAS PROSSER & SON, Agents, 15 Gold street, N. Y.—This very convenient little weighing apparatus consists simply of a small cylinder, perfectly turned out, and a piston working in it. The cylinder is filled with castor oil, and, as the strain brings the piston down, the oil is forced into a flattened steel tube curved in a semi-circle, the "free" end of which is connected by levers, and a rack and pinion of clock-work, to a needle moving around a dial. The greater the pressure on the oil, the more will the curved tube tend to straighten itself, and consequently the further will the needle move round on the dial. The piston in the oil cylinder is packed with a leather ring, as is also the stuffing-box. The end of the piston rod forms an eye, to which the load to be weighed is attached. The whole apparatus, for a machine to weigh from half a ton to 50 tons (they vary little in size), is only 8 or 10 inches in diameter, and is easily carried about, as is seen by the following price list. The dials are all graduated on actual experiment, by loading the machine and marking the position assumed by the needle; in this way the friction of the packing, which remains constant, does not sensibly affect the accuracy of the machine, nor is that affected by leakage from the cylinder until the piston touches the bottom of the cylinder. In that case the remedy is exceedingly simple, as, by unscrewing a nut, the cylinder can be refilled without trouble.

This machine can be used in any position, horizontal or vertical, and it is therefore applicable as a dynamometer for measuring the power employed in moving trains, the strain in ropes, &c.; and as it is always ready, and can be attached to any block and fall so that the weighing is effected in lifting the object, and without additional labor, the advantages of so simple and convenient a machine must present themselves to every one. Their use would soon save many times over their moderate cost. The following are some of the sizes made:

Capacity of Machine.....Tons	1	10	50	100
Smallest weight indicated on Dial.....lb.	5	50	100	200
Weight of Machine.....lb.	40	95	450	600
Price—Boxed.....each	$120	$190	$475	$650

THE WRIGHT STEAM ENGINE, manufactured by WM. WRIGHT & Co., Newburgh, N. Y. This admirable engine drives the machinery on the north side of the machinery wing of the Fair. Its most striking feature is its *extreme simplicity of construction*, for, while having a perfectly automatic cut off, it is almost as simple as the ordinary slide valve engine, now in general use. The following description will give the principal points of interest:

"The cylinder is fitted with Wright's patent slide valve cut-off, worked by steel cams, to which a longitudinal movement is given by the governor.

The cylinder is connected to the main pillow-block bearing by a strong wrought-iron or cast brace. The governor is located upon a standard in the center of this rod or brace, and is driven by a belt from the crank-shaft. The governor-spindle passes down through this standard and gives a longitudinal movement to the cut-off shaft, through levers which vary the cut-off to any point in the stroke necessary to balance the load on the engine.

"The cams upon the cut-off shaft have a rocking motion derived from an eccentric on the main shaft, communicating with levers to the cut-off shaft. One eccentric gives the motion, not only to the cut-off, but to the exhaust valves. The concentrating of nearly all the valve-gearing in one place adds not only to the beauty and simplicity of the machine, but is much more convenient to adjust and handle.

"An unhooking arrangement is fitted to the pin in the lever, whereby the engine can be stopped and reversed by hand at pleasure, by a starting-bar.

"The cross-head is carried in cast-iron slides, which are solid and cast on the bed. The feature of the cross-head is its stability, which is secured by its having a very broad bearing on the bottom and sides, as also a top bearing with brass gibs; on the bottom is a broad shoe, adjustable with set screws."

At a trial of Wright's Compound Engine (using high and low pressure cylin-

ders) at Newburgh, N. Y., made by A. S. GREENE, C.E., Chief Engineer U. S. N., the very remarkable result of one horse-power per hour was obtained with 1.805 lb. of average quality Lackawanna anthracite (chestnut size); this is equivalent to a duty of about 110 millions foot pounds per 100 lb. of coal. The engine was indicating 354 horse power. When this result is compared with the consumption of say 10 lb. per horse power, which would probably represent the average in the engines used about our mines, the saving of coal would pay for the engine in a short time. But the saving of fuel is not the only advantage of the Wright engine, the automatic cut-off gives a uniformity to the speed which cannot be attained in the ordinary engine working under variable duty, but which is in the highest degree desirable, while the cost of the engine is but little more than that of the common slide valve engine.

The Iron Ores of Sweden.*

By MR. CHARLES SMITH, Barrow-in-Furness.

ALTHOUGH the iron trade of Sweden is on a very small scale, compared with that of England, the quality of much of the metal manufactured is of so high a character, that the subject has an importance far beyond the mere question of the quantity produced. In round numbers, England makes twenty times as much iron as Sweden; the Furness district alone producing more iron and iron ore than the whole of the latter kingdom. Notwithstanding this comparative insignificance in quantity, the Swedes, with their wonderfully pure ores, have succeeded in manufacturing iron which, in many branches of trade, appears for the present to be a necessity, and which is perhaps the finest in Europe. On these considerations, I shall hope that a brief account of the Swedish iron ores may not prove uninteresting to many members of the Institute.

SWEDISH IRON ORES.—The iron ores of Sweden are, with an insignificant exception, of one class; and though they vary considerably in their iron percentage, and to some extent in other constituents, they have a very great external similarity. The ore is either Magnetite or Red Hematite, containing every percentage of metallic iron, from 30 per cent. to almost chemical purity, which, for the former, would be 72, and for the latter, 70 per cent. The hematite, called "bloodstone," gives the same streak as the English red hematites, but is externally scarcely distinguishable from the magnetite; both kinds are named, in Swedish, "Mountain ores;" they have a slightly different aspect to the Spanish and Algerian magnetites, but possess nearly the same blue-black color.

BROWN IRON ORE.—A small varying quantity of brown hematite is procured in the south of Sweden, from the large bogs of Smaland; and in winter a similar ore is dredged from the bottom of certain lakes in the same Province. The average of this ore would probably not exceed 25 per cent. metallic iron, though it occasionally contains 50 per cent.; frequently it is so intermixed with sand as to be of little value; phosphoric acid is generally present, sometimes up to 4 per cent.; manganese is often a constituent, and in a few places has a strength of 20 per cent. The yearly quantity raised of this ore is as varied as its composition; in 1853, it was 12,000 tons; in 1860 20 000 tons; in 1866, 8,000 tons; in 1877, 17,000 tons; in 1869, 6,000 tons; in 1871, 15,500 tons; in 1872, 12,000 tons.

OTHER ORES OF IRON.—The other ores of iron, with trifling exceptions, do not occur in Sweden. The red and brown hematites and the oolitic ores, such as those we have in England, are absent altogether; chalybite, the white carbonate, is found in hand specimens in a few of the metalliferous mines; and a thin, insignificant bed of argillaceous iron ore has been met with in the Skane coalfield.

CONSTITUENTS OF IRON ORES.—Judging from official returns, the average yield of the "Mountain" ores throughout the kingdom is under 50 per cent. metallic iron. In 1872, from 671 mines, 718 000 tons of ore were raised, and 333,000 tons of iron were manufactured; but of the former, 12,000 tons were bog and lake ores, with very low percentages, and about an equal quantity of the "Mountain" ores was exported to Finland. Besides the iron oxide, the main constituent of the ores is almost invariably silica. Lime, magnesia and alumina are generally present, the last usually in the smallest quantity. Phosphorus has rarely a greater strength than 0 05, though in some ores, not worked, upwards of 1 per cent. is found; and it sinks to 0 004 at Persberg, and to 0 003 at Dannemora. Sulphur, with a few marked exceptions, is not generally present to a much greater extent than phosphorus.

GEOLOGICAL POSITION OF IRON ORES.—The surface of Sweden is mainly covered by plutonic rocks, of which granite is the most abundant, although large areas are occupied by gneiss, mica-slate, and every variety of porphyry; there is also a felspathic rock peculiar to Sweden, termed "Hell-flinta," or Leelite, which, though small in quantity, is of great importance in reference to iron, as this metal is nearly always present where Helleflinta occurs. Over a vast area, in these granitiferous rocks, iron ore is found in greater or less abundance; though, doubtless, the iron districts are still most imperfectly known, as so much of the country, especially in the north, is, for iron-making purposes, inaccessible. Far in the north, beyond the head of the Gulf of Bothnia, the iron deposits of Gellivara are probably the richest in the world; but the rigor of the long winter has, hitherto, prevented any commercial success in the working of the mines; and, according to the Government returns, the annual production does not reach 50 tons of ore. More to the South, a few small mines are worked, but only on the most limited scale, until the parallel of Gefle is reached. We may, perhaps, assume that future research will prove that Sweden possesses the greatest stores of her purest ore in her most northern provinces; but we can scarcely hope that these can be made available, without changes in the value taking place that, at present, cannot be anticipated. In the southern portion of the kingdom very little ore is raised. The main bulk is obtained from the central provinces. The counties of Kopparberg and Örebro alone produce 50 per cent., and Westmanland and Wermland 30 per cent. of the whole yield.

MODE OF OCCURRENCE OF IRON ORE.—Iron ore is by far the most important Swedish mineral. The "Mountain" ores occur in veins, which are sometimes regular, but more generally are deflected from a straight line, and occasionally even form a semi-circle. Usually they have a north east to a south-west direction, though north to south and east to west veins occur. Their width varies from mere strings up to, as at Dannemora, 150 feet. Probably 30 to 50 feet would be the general strength of the veins now worked. In some instances, these can be traced for some distance along the surface; but, commonly, they dip down at a steep angle. As so many are known, few have been thoroughly explored as to their depth; when worked to 200 or 300 feet deep, other shallower veins have been started, except in the more important deposits.

MODE OF FORMATION.—The mode of formation is, as yet, an unsolved problem. Many difficulties present themselves in opposition to each of the more popular solutions. The veins are occasionally found in gneiss; at other times in granite; but, generally, they are separated from their granitiferous surroundings by a band of Helleflinta, which is usually only present in small quantities; but at Persburg, the largest mine in Sweden, the surface for two miles in one direction is composed of it. In some cases, the veins descend perpendicularly; and in at least one instance (at Persberg), the vein, after so doing, makes an elbow at right angles and lies horizontally.

It is commonly believed that the ore is an aqueous deposit; probably from hot water. Though many facts support this theory, many will not coincide with it; perhaps the chief being that there is not the slightest external appearance of the ore being a water deposit, as it is in solid irregular masses, lying in equally solid rock, which in those cases where granite overlies is unquestionably plutonic. Assuming that Helleflinta is an altered clay, which has by no means been proved absolutely, and that both it and the ore were deposited simultaneously, there would be some mechanical mixture of the two and not the perfect demarcation that exists. If the ore were an aqueous deposition, it must necessarily have been, at some time, horizontal; and whatever the convulsions were, which could, as in the Persberg instance, tilt up one end of the vein to the extent of 90°, they could not do this without a great dislocation of both the vein and the surrounding rocks, whether it happened before or after the solidifying of the ore and the Helleflinta, and this is not the case.

In certain instances, the iron oxide is found interspersed in grains for some distance on either side of a vein, which becomes more and more rich as it approaches the center, where is the purest part. It is difficult to account for this on any ordinary aqueous or igneous theory.

The peculiar magnetic properties of much of the "Mountain" ore offer little assistance to the solution of the problem of its formation. The magnetite and hematite are found closely intermixed, the one highly magnetic, the other not affecting the needle; the ores being similar in appearance and constituents. Some masses of magnetite are much more magnetic than others, affecting the compass through 20, or even 50, fathoms of intervening rock; whilst to some bodies of equally true magnetite, the needle will not dip, though not more than 10 fathoms of rock intervene.

In several districts, especially in the Norberg mines and, to a less extent, in those near Nora, the ore has a very singular striped appearance, caused by numerous veins, or nearly parallel layers, of crystallized quartz lying amongst the ore.

May I be allowed to suggest that, perhaps, electricity may have been the chief agent in the formation of these mineral deposits. It is difficult to understand in what possible way they could be formed by volcanic action; and it appeared to me to be equally impossible to understand how these veins of iron ore, which dip steeply over immense areas of country, could owe their origin to water, without exhibiting some trace of aqueous deposition; especially when their centers are the purest part, whilst they gradually on either side pass imperceptibly into the surrounding rocks. It seems still more difficult to account, either by the aqueous or igneous theory, for the finely veined ores of Norberg, consisting of thin parallel layers of magnetite and crystallized quartz. But what might be difficult, or impossible, for fire or water to accomplish, might perhaps be effected by electricity, if we assume that currents may have acted, in definite directions, for long periods of time, segregating the particles of iron oxide, which exist in a slight percentage throughout vast masses of many Swedish rocks.

TO BE CONTINUED.

* A Paper read before the British Iron and Steel Institute, at Barrow-in-Furness, September, 1874.

The Growth of the Iron Trade in France.

THE enormous changes which have taken place in France since the new commercial treaties have been in force give much importance to the official reports on the progress made in the iron trade. These reports only come down to 1869—the following year was a blank—and the recent condition of that trade has been duly recorded in the columns of *Iron*.

France is fairly supplied with deposits of iron ore, the eastern departments being the richest in that respect, and exporting a certain amount of ores; on the other hand, the furnaces of France draw largely on the ores of Italy, Spain, and Algeria, the special qualities of which diminish the cost of fuel in smelting.

In 1865, the quantity of ore extracted in France was 3,658,464 tons, valued at 14.500,000 fr.; and the quantity smelted, 3,010,658 tons. In 1869, the raw ores extracted amounted to 3 466,000 tons, but the number of men employed in the mines had diminished from 13,847 to 9987, the annual production per head having grown from 264 to 347 tons, and the wages from 619 to 637 fr. Of the forty-two departments producing iron ore, the most important are the Moselle, the Meurthe, the Haute-Marne, and the Ardèche. The price of ore followed that of iron; the average quotations fell from 0·542 fr. to 0·426 fr. per quintal. In two departments, however, it reached 1 fr. 80 c. The ores are not generally found in the immediate neighborhood of the works, and in some instances they are conveyed a considerable distance. In 1865, the proprietor of the soil drew 10 per cent. of the total value of the ores, but in 1869 this tax had fallen to 6 per cent.

Since 1860, the whole of the machinery and processes employed in the iron trade have been completely modified and improvements are still being made which exhibit much skill and scientific knowledge. The charcoal furnaces diminish every year. During the eight years which have passed since the commercial treaties have been in action, which brings us down to the present year, the charcoal furnaces are two-thirds less in number than they were, while those using mineral fuel are more numerous by one-quarter; moreover, the latter have assumed much larger proportions. The change is equally remarkable with respect to the manufacture of wrought iron. From 1861 to 1869 there were but 1014 to 1111 puddling furnaces worked exclusively with coal, while the number of the old Catalan forges fell from 68 to 24; the number of refining furnaces fell during the same period from 510 to 303.

The effect of these changes was as follows:—The production of charcoal pig fell from 193,928 to 112,690 tons, and that of mixed fuel pig was diminished by one quarter, making a total reduction of 103,670 tons in five years. On the other hand, the weight of coke pig rose from 921,908 to 1.202,833 tons, so that the increase in the latter kind of pig iron surpassed the falling off in the former kinds to the extent of twice and a-half. The principal departments which produced coke pig were: the Moselle, which made 348,287 tons; Saône and Loire, 122,500; Ardèche, 109.753, and the Nord, 96,846 tons. The price of charcoal pig fell from 14 fr. 51 c. per quintal, in 1865, to 13 fr. 14 c. in 1869, and coke pig from 8 fr. 99 c. to 7 fr. 94 c. in 1868, rising again to 8 fr. 0·8 c. in 1869.

The quantity of raw pig transformed by second fusion with foundry pig grew in the five years, from 252,653 tons to 303.920 tons, while the price fell from 26 fr. 40 c. to 25 fr. 56 c.

It is not necessary to follow the official statement and give the details of the cost of making iron with charcoal, and charcoal and coke mixed, or coke; it is

sufficient to give the result, which is that in the two former cases the cost of fabrication is 83 per cent., and in the latter 77 per cent., of the average selling price of the pig iron.

During the same period, the production of wrought iron from charcoal or mixed pig fell, respectively, 14.522 and 3976 tons, while that from coke pig rose 152.977 tons.

In consequence of the rivalry between French and foreign ironmakers, the forges least advantageously situated with respect to the supply of ore and coal disappeared, and the business, while increasing, became concentrated around a smaller number of industrial centers with advantage. In 1869, the Nord produced 171,869 tons; the Moselle, 140,761 tons; the Loire, 90,148 tons; and the Saône et Loire, 81 077 tons.

The make of rails presents important results. In 1865, the quantity produced reached 208,786 tons, of the value of 40,568,410 fr., but fell during the three following years to 186 028 tons, of the value of 34,656,643 fr., rising again in 1869 to 216 628 tons, of the value of 41,704,738 fr., the extreme prices being 19 fr. 43 c. in 1865, and 18 fr. 13 c. in 1867.

The manufacture of iron with mineral fuel reached, during the period in question, to 760,899 tons, valued at 160,000,000 and a few thousand francs, and required 1,426,146 tons of coal at 15 fr., and 1486 tons of coke at 23 fr.; thus each ton of iron, of the average value of 210 fr. 3 c., required in its production 187 kilos. of coal and 2 kilos of coke, worth together 28 fr. 10 c., which shows that the cost of fuel for wrought iron made from coke pig did not exceed 14 per cent. of the value of the iron produced. In the old Catalan method, in which the whole cost of producing pig was avoided, the cost of the fuel used was not less than 58 per cent. of the value of the iron produced.

The quantity of sheet iron produced did not vary much, it amounted in 1865 to 100,915 tons of the value of rather more than 36,000,000 fr., and in 1869 to 107,441 tons.

The production of iron wire fluctuated considerably; it amounted to 43,000 tons in 1865 63,000 tons in 1868, and 56,000 tons in 1869. Its price did not vary more than 2 per cent. during the period.

Taking into account all kinds of steel, except cast, which is a secondary production, the fabrication of cemented steel has quadrupled in forty-three years, and that of puddled and Bessemer steel has multiplied thirty times.—*Iron.*

Important Discovery of Silver and Gold Ore in Nevada.

From the *Silver State.*

A SHORT time ago DAVID BUTLER and others discovered what promises to be one of the richest mining districts in northern Nevada, ten miles from Bartlett Creek, and about seventy miles "as the crow flies" northwest from Winnemucca. Upon making the discovery, the prospectors organized a new district, which they named Snow Creek, and located six ledges, all of which crop out to a greater or less extent, and contain free gold and silver bearing ores. On the largest and most promising of the ledges, named Belle of the West, a shaft has been sunk to the depth of fifteen feet, and the ore assays from $244 in silver and $94 in gold to $1500 per ton. Pieces of ore burned in an ordinary fire yield almost pure silver, so tractable as to be easily amalgamated by ordinary mill process. The formation in which the ledges are found is granite, and bears a close resemblance to the country at Silver City, Idaho.

Lake Superior Ore Trade.

THE following table will show the total shipments, in gross tons, from the Lake Superior iron district for the season of 1874, up to October 22:

Iron Ore.	Tons.	Pig Iron.	Tons.
From Marquette	391,880	From Marquette	22,058
From Escanaba	245,170	From Escanaba	13,253
From L'Anse	79,344	From Grand Island	9,768
Total	716,394	Total	45,079

The shipments of ore to date aggregate more than 300,000 tons less than for the corresponding time last year.

Notes.

Manufacture of Iron in India.—With a view to adopt some definite line of action in regard to the manufacture of iron in India, the Government, some time ago, called for detailed information on the subject from the various provincial Governments. The result is a resolution embodying an account of the latest discoveries in connection with iron deposits and the mineral resources in their proximity whereby they may be utilized. Both the coal and iron in the Raneegunge field contain phosphorus, which exercises an unfavorable action in the manufacture of good iron, and there is the further difficulty of procuring materials for promoting fusion. Mr. HUGHES, of the Geological Survey, however, thinks that the limestone known as *kunkur*, which abounds in the neighborhood of the iron ores, may be found useful as a flux. Another means suggested for surmounting this difficulty is the application of Mr. SIEMENS' process of making malleable iron direct from the ore, which avoids in a great measure the necessity of a flux. It is proposed that specimens of iron ore from different parts of the Raneegunge fields be sent to England to be subjected to this process, and the Government of India are prepared to forward thither at the public expense consignments of the ore for that purpose. Offers from those interested are invited, it being understood that the consignments are not to exceed 100 tons in weight. Kumaon is altogether condemned as an iron working district; on the other hand, the prospects of the manufacture in the Central Provinces have been improved by the discovery of coal at Lohara, where iron deposits are found, and of iron ores close to the coal-field of Warrora. The chief commissioner is to be asked to report upon the facilities for establishing a Government iron manufactory in the neighborhood of Lohara. In Southwest Behar, at Palamow, there is a field open, which private enterprise might advantageously occupy. Of all the specimens of iron ore analysed that from Palamow has been found the purest. There is also a coal deposit close there, and if the field turns out to be promising and private enterprise will avail itself of it, Government offers to improve the communication between Palamow and the head of the Soane canal.

Leveaux's Patent Spring Motive Power for Tramways.—One of the most important engineering problems of the time, since the introduction of tramways—which may now be accepted as a permanent institution—has been the application and introduction of some motive power which shall supersede traction by horse. This may be regarded as a great desideratum, if not a necessity; from a pecuniary as well as a humanitarian point of view. We have recently had our attention directed to the patented invention of Mr. LEVEAUX, namely, for the storage and development of power by means of volute steel springs, which, being coiled within barrels, are applied by suitable gearing to the drum wheels of a tramway car, so as to generate the necessary tractive or propelling force. The soundness of the principle is demonstrated practically, not only by an effective working model to 1-6th scale, but also in actual working practice, as applied to a full-sized car; both of which we have seen and tested in full operation. As regards the manufacture of the springs—the chief difficulty which Mr. LEVEAUX has had to contend with—the steel manufacturers of Sheffield have been put "on their mettle," and are advancing towards the successful production of steel springs of the necessary size and power, wherefore, at an early date, the invention will be submitted to the test of a public trial on one of the Metropolitan Tramway lines. The action of Mr. LEVEAUX's spring, as a motor, is smooth, equable and noiseless, entirely under control of brake-power and reversing gear, and appears fully to realize all the conditions necessary to a satisfactory and practical solution of this important problem in urban circulation.

Commercial Progress of New Zealand.—New Zealand is beginning to show a sure sign of growing importance by forming a "manifest destiny" theory. Mr. VOGEL, the Premier, has lately laid on the table of the House of Representatives a remarkable scheme for extending the influence of New Zealand over the whole of Polynesia. It is his belief that New Zealand must sooner or later—and the sooner the better—make herself the center of a Polynesian dominion, having the same relation as Canada to the Mother Country. At present, Mr. VOGEL says, the colonists cannot regard without alarm the disorders that prevail in some of the islands, and the prospect that some foreign power may obtain a footing in their own neighborhood. It has been proposed as a means to the great end that a trading company shall be formed in England, with a view of absorbing by its commercial power a large share of political control in the islands. Mr. VOGEL approves of this scheme, but carries it further by suggesting that the New Zealand Government shall have an important share in the management of the company. The company is to be, in fact, a Government scheme, New Zealand guaranteeing 5 per cent. for 40 years on the share capital of £1,000,000, and appointing a managing director and secretary. The company is to have permission to carry on the business of merchants and shipowners, planters, producers, manufacturers, brokers, agents, insurers and bankers.

The James River Coal Company have made a very valuable discovery of carbonite upon their property, near Richmond, Va., in an old shaft sunk through the carbonite vein to the underlying coals, many years ago, before the carbonite was considered of any value. Former operators have believed that the vein did not exist in this shaft, but it is now found of excellent quality, about two hundred and thirty feet from the surface, and the company are already driving their gangways from the shaft. The value of this discovery is enhanced by the fact that the pumping for their mining operations in No. 2 and No. 3 coal seams is done through this old shaft, so that they now find upwards of two hundred thousand tons of this valuable fuel opened for economical mining, with no additional expense for drainage or pumping. The company are also opening the carbonite seam at another point, about a mile distant, and expect within a month to begin shipping from both these openings in addition to the product of their present Carbon Hill mines.

Burnt or Missing Coal Vessels.—A return has recently been made to the House of Commons of "All vessels coal-laden bound to the eastward of the Cape of Good Hope, burnt or missing" from 1868 to 1873 inclusive, from which the following particulars are taken. In the six years there were 38 sailing vessels and one steamer burnt or missing, of which 24 sailing vessels, or 61·54 per cent. were burnt, and 14 sailing vessels and one steamer, 15 in all, or 38·46 per cent. were missing. The vessels sailed from ports in the United Kingdom as under:—Cardiff, 3; the Clyde, 9; the Mersey, 8; total west coast, 20; the Tay, 2; the Forth, 1; the Tyne and Wear, 14; the Humber, 1; the Thames, 1; total east coast, 19; total, 39. The missing vessels give an aggregate of 358 lives lost, equal to an average of 24 men to each ship, and of 2·31 men per 100 tons register.

A Foreign Demand for American Machinery is much to be desired, especially at such a time as this, and we are glad to learn that some of our manufacturers are seeking and finding it. Dr. WILLIAMS, of the Baldwin Locomotive Works, has just returned from Brazil, and, we are glad to announce, with a number of orders for locomotives for that country. Mr. FRANCIS, who represents the establishment of Messrs. WILLIAM SELLERS & Co., is now on the west coast of South America, to cultivate business relations with the countries in that region. In the present depressed condition of trade we are glad to hear that the enterprise of our manufacturers leads them to seek foreign markets for their productions, and also gratified to report any foreign demand for American products.

A Big Blast.—On Friday, at the Blue Tent Consolidated Hydraulic Gold Mines, says the Nevada (Cal.) *Transcript*, of October 25th, they had an immense blast of 700 kegs of black powder, which was fired by Farmer's Electric Dynamo Blasting Machine, the first used on this coast for that purpose. The amount of gravel loosened, and the condition of the bank after the blast, has convinced all miners in this section that it is the only true way to blast to get the best results and full benefit of the powder used. The bank was 150 feet high. The main drift was 100 feet back, with three cross drifts, T's or L's, each 60 feet long—280 feet of drifting in all. The bank was thoroughly shaken for over 60 feet, beyond the extreme back drift. This machine is being introduced on this coast by Messrs. PARKE and LACY, the agents of the Burleigh Rock Drill.

Ferro-Manganese.—The Terre-Noire, La Voulte and Bességes Iron Company thus describe their improvements: With the following mixture: Oxide of iron, 100; oxide of manganese, 750; lime, 20; oil, 500, a metal is produced containing from 75 to 80 per cent. of manganese, and a slag composed of the following: silica, 12·2; alumina, 3·7; lime, 7.1; barytes, 21; protoxide of manganese, 56. By increasing still further the proportion of oxide of manganese in the bath of metal, as much as 82 or 83 per cent. may be obtained; but a long time is required for its reduction, and the investigation into alloys so rich as this has not the same interest.

Belgian Coal Mining.—The number of collieries in activity in the Charleroi district is 56, and there are 112 centers of working. The number of winding engines is 177, of an aggregate force of 17,000 horse power. The number of drainage engines is 67, of an aggregate force of 10,226 horse power; and the number of ventilating engines is 146, of an aggregate force of 4507 horse power. There are 222 miscellaneous engines of an aggregate force of 2063 horse power. The extraction of coal in the basin last year was 6,614,500 tons.

THE ENGINEERING AND MINING JOURNAL.

NEW YORK, SATURDAY, NOVEMBER 7, 1874.

ROSSITER W. RAYMOND, Ph. D., RICHARD P. ROTHWELL, C. E., M. E., } Editors.

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CONTENTS FOR THIS WEEK.

The Fair of the American Institute..... 289
The Iron Ores of Sweden..... 290
The Growth of the Iron Trade in France.. 290
Important Discovery of Silver and Gold Ore in Nevada..... 291
Lake Superior Ore Trade..... 291
Notes..... 291
EDITORIALS:
The American Institute of Mining Engineers..... 292
The Coal Programme for '75..... 293
Coking Anthracite..... 293
The Cause of the Large Runs at the Lucy and Isabella Furnaces..... 293
Miners' National Association..... 294
CORRESPONDENCE:
Gold Mines of Tolima, U. S. of Colombia..... 294
Important Discovery of Coal at Lasalle, Illinois..... 294
COAL TRADE REVIEW..... 294
Review of the British Coal and Iron Trade 297
IRON MARKET REVIEW..... 297
Metals..... 298
Miscellaneous Stock Market..... 298
Boston Stock Market..... 298
San Francisco Stock Market..... 298
American Institute of Mining Engineers.. 298
Advertisements..... 299

The American Institute of Mining Engineers.

TWELFTH MEETING, HAZLETON, OCTOBER, 1874.

EXCURSIONS OF TUESDAY, OCTOBER 27.

BEFORE the opening session of Tuesday evening, October 27, the proceedings of which were given in our last number, a large number of members and visitors made a visit to the Laurel Hill colliery—No. 2 of the Hazleton slopes. This colliery is owned by the Lehigh Valley Railroad Co., and operated by A. PARDEE & Co., lessees, Mr. CALVIN PARDEE being the superintendent. The party, guided by Mr. THOMAS DICKERSON, the underground foreman, went a mile and a quarter through the mine, including a ride of about 1500 yards underground with one of the small locomotives here in use. The same afternoon, before returning to Hazleton, the party visited the shops of the Lehigh Valley Railroad Co., where they were received by Mr. DAVID CLARK, the master mechanic. In these shops all the machinery for both the mines and the railroad is constructed, including engines, pumps and locomotives.

EXCURSIONS OF WEDNESDAY.

On Wednesday morning the Institute left Hazleton by special train, under the guidance of Mr. H. S. GOODWIN, assistant superintendent of the Lehigh Valley road, and visited the coal-basins of Big Black Creek, Cross Creek and Upper Lehigh. The weather was perfect; and the picturesque valleys and wooded hillsides of the country still retained sufficient of their autumn glory to blend with the hazy atmosphere into a charming picture. The collieries of COXE BROTHERS & Co. at Cross Creek and Woodside were first visited, and the arrangement of slopes, breakers, tramways, etc, was inspected under the courteous guidance of Mr. ECKLEY B. COXE and Mr. ARTHUR MCCLELLAN, the superintendent. From Woodside, a long procession of carriages conveyed the merry company to Upper Lehigh, where Messrs. DANIEL BERTSCH, superintendent, SAMUEL PRICE, agent, and THOMAS M. RIGHTER, mining engineer and assistant superintendent, of the Upper Lehigh Coal Co., were in waiting to receive them and show them the sights of the locality. After a brief stay at this point, the ride was continued to the summit just beyond, where, by dismounting from their carriages and walking a few yards through the forest, the travellers arrived at Prospect Rock, from which point a wide and magnificent view was obtained, ranging many miles in extent, and comprising the outcrops of the successive measures of the coal region, to the mountains on the south side of Wilkes-Barre, on the Susquehanna. After visiting a new slope now sinking, by the Upper Lehigh Co., in solid rock, with the aid of the Ingersoll power drill, the party proceeded to Drifton, where they were sumptuously entertained at the residence of Judge CHARLES S. COXE. After dinner, the railway cars were resumed, and, passing Jeddo, (colliery of G. B. MARKLE & Co.), the train made a brief stop at Ebervale, where the handsome and extensive colliery of which Mr. WM. J. HARRIS is superintendent, received attention. Mr. HARRIS had got out of the mine, in honor of the visit, a solid lump of coal, almost without a trace of slate, cubical in shape and weighing 2½ tons. In connection with this colliery, much interest was attracted by a canal, dug for the purpose of draining a large swamp, under which it is desired to extend the underground workings. This canal has been dug for more than two miles by a steam-dredge, mounted upon a scow. A pit being first dug and filled with water, the scow was launched in it, and has since gone ahead, first excavating, and then navigating, its own canal. At the neighboring colliery of the Lattimore Co., Gen. PARDEE, of PARDEE BROTHERS & Co., the lessees, and Mr. M. M. COOPER, superintendent, showed the party another canal excavated by hand for a similar purpose. In this case, it is said, by the employment of cheap Italian labor, the work was done (in frightfully muddy ground) for 50 to 60 cents per cubic yard; whereas it is claimed that, aside from the first cost of the machinery ($5000 to $6000), all the expenses of dredging a canal would be comprised in the sum of 10 cents per cubic yard. The excursion was continued to the Milnesville colliery (Stout Coal Co. lessees; WM. J. HARRIS, superintendent) and so, past the Stockton colliery, back to Hazleton. There was, unfortunately, not time to visit the Hollywood colliery, just west of Milnesville, (CALVIN PARDEE & Co. lessees)—a new enterprise, in the prosecution of which a singular plication has been encountered in the Mammoth vein, giving to this colliery two overlaps, or three thicknesses, (in all, some 120 feet thickness) of the vein.

SECOND SESSION, WEDNESDAY EVENING, OCTOBER 28.

After the election of new members and the usual business announcements, the following papers were read and discussed:

Prof. J. C. SMOCK, New Brunswick, N. J., on Mining Clay.

Mr. E. C. PECHIN, of Dunbar, Pa., on The Iron Ores and Products of Southwestern Pennsylvania.

Mr. OSWALD J. HEINRICH, of Midlothian, Va., a Supplementary Paper on Deep Boring with the Diamond Drill.

Mining Councilor Dr. J. BURKART, of Bonn, Germany, on The Mining Statistics of Austria.

President RAYMOND exhibited very beautiful specimens of wulfenite (molybdate of lead) from the Tecoma mine in Nevada; also, a specimen of green fluorspar from Zinnwald, Bohemia, in which cubic crystals were combined into distinctly octahedral aggregates.

Mr. G. L. BRADLEY, of Providence, R. I., exhibited specimens of the steel containing 0·3 of phosphorus, manufactured by the Martin process at Terre-noire, in the South of France, by the aid of ferro-manganese, instead of spiegeleisen. The samples included some taken before, and some after, the addition of the ferro-manganese; also, a piece of rail.

EXCURSIONS OF THURSDAY, OCT. 29.

Thursday morning, at 9:30, the Institute went by special train to Crystal Ridge, a colliery worked by A. PARDEE & Co., on the Cranberry estate. Here a new slope is sinking, and a large breaker, which was begun Sept. 1, is already inclosed, and part of the machinery is in place—a remarkable instance of quick work. Close by, the outcrop of the coal is beautifully exposed, in the "cave" between the old Laurel Hill works and the Crystal Ridge basin. The Mammoth vein, with a thickness of thirty feet, comes to the surface in a sharp anticlinal, and plunges again into the depths.

Returning from this trip, the Institute left Hazleton at 10:30 for Mauch Chunk, where a lunch was provided in the capacious dining-room of the Mansion House, after which carriages and omnibuses conveyed the party to the experimental works of Mr. E. F. LOISEAU, the inventor and manufacturer of the artificial fuel which bears his name. Here the whole process of manufacturing anthracite coal dust, with 5 per cent. of clay, into hard, compact, oblate spheroidal pieces of fuel, and the dipping of these, to render them water-proof, in a benzine solution of resinous matter, was performed to the great interest and satisfaction of the spectators. At the hotel, a grate filled with LOISEAU'S patent fuel presented, without replenishing or stirring, a glowing and uniform fire from 9 A. M. to late in the night; and at 10 on the following morning, it was not yet burnt out. The egg-shaped pieces retain their form to the last, seeming, when entirely burned, balls of ashes, which can be crumbled in the hand. There is no sign of clinker about this fuel.

A train in waiting on the Switchback conveyed the party to Summit Hill, whence they proceeded on foot to the old collieries and open pits where anthracite was first mined for market, and obtained, from some of the colossal waste-dumps, magnificent views of the coal-basin below. Near slope No. 8, a railway-train received them, and transported them through the Nesquehoning tunnel, back to Mauch Chunk. A brief visit was made *en route* at the works of the Lehigh Coal Washing Company, where all the coal from this district is broken and cleaned from slate in jigs. The machines in use are BRADFORD'S and PLUMB'S, of which the latter is preferred, especially for the larger sizes.

Dinner at Mauch Chunk was served at 7 o'clock.

SESSION OF THURSDAY EVENING, OCTOBER 29.

After the usual announcements and election of new members, a resolution was unanimously passed, instructing the officers of the Institute to present thanks to the citizens of Hazleton, the proprietors of collieries and other works, the Lehigh Valley and Central New Jersey railroads, and the efficient Local Committee, for the arrangements which had secured so successful a meeting. The following papers were then read and discussed:

Mr. WILLIAM A. SWEET, of Syracuse, N. Y., on a Gas Re-heating Furnace;

Prof. T. STERRY HUNT, Notes on the Hoosac Tunnel;

Mr. R. P. ROTHWELL, on a Method of Topographical Surveying;

Mr. R. W. RAYMOND, on the Gold and Silver Product of the United States;

Mr. THOS. S. MCNAIR exhibited a specimen of anthracite which had been altered to resemble cannel coal, by the effect of the discharge-steam from a pump.

Prof. B. W. FRAZIER exhibited a specimen of sal ammoniac, crystallized upon a brick, from a gas flue of one of the blast-furnaces at Glendon, Pa.

A paper by Prof. FRAZIER was read by title, on the Economy of the Blast-Furnace, after which, with a few congratulatory words from the President, the Institute was adjourned to the next meeting, in February.

EXCURSIONS OF FRIDAY, OCTOBER 30.

In spite of the adjournment of the night before, some fifty of the members reported themselves in the morning for an excursion to Hockendauqua (Thomas Iron Co.), the Fogelsville R. R., the Ziegler and other hematite mines, and finally to Bethlehem, where, after a grand public dinner, they visited the superb works of the Bethlehem Iron and Steel Company, viewing the Bessemer plant in full operation, and the interesting establishment of the Lehigh Zinc Company. Mr. JOHN FRITZ, of the former company, and Mr. B. C. WEBSTER, of the latter, received their visitors with a courtesy born of native character and perfected by long and unremitting exercise. From Bethlehem the members were scattered in various directions, seeking their respective homes.

List of Members and Associates elected at the Hazleton meeting:

W. M. HABIRSHAW, New York City.	ORRIN C. FROST, Watertown, N. Y.
P. W. SHEAFER, Pottsville, Pa.	JOHN COLLETT, Newport, Ind.
D. K. FERGUSON, St. Louis, Mo.	D. E. GARRISON, St. Louis, Mo.
REGIS CHAUVENET, St. Louis, Mo.	ANDREW ROY, Columbus, Ohio.
ELLIS CLARK, Jr., Easton, Pa.	I. M. ST. JOHN, Quinnimont, W. Va.
S. MORRIS, Quinnimont, W. Va.	ABRAHAM S. SCHROPP, Bethlehem, Pa.
H. MARTYN CHANCE, Philadelphia, Pa.	MOSES STRONG, Mineral Point, Wis.
E. T. SWEET, Madison, Wis.	H. C. HOPPER, Newark, N. J.
W. C. ROSS, New York City.	A. F. SCHNEIDER, New York City.
JOHN H DEWEES, Pottsville, Pa.	C. H. NIMSON, Allentown, Pa.
G. L. BRADLEY, Providence, R. I.	Prof. J. L. MORRIS, Ithaca, N. Y.
J. B. WALKER, Charleston, W. Va.	Dr. J. BURKART, Bonn, Germany.
J. C. HAYDEN, Jeansville, Pa.	WM. LANDER, Riddlesburg, Pa.
W. GALIGHER, Bingham City, Utah.	Dr. W. BREDEMEYER, Bingham City, Utah.
W. E. C. COXE, Reading, Pa.	THOS. WHITWELL, Stockton-on-Tees, Eng.
GEO. H. REYNOLDS, New York City.	JOSEPH P. SILLYMAN, Hazleton, Pa.
JOHN GRIFFEN, Phœnixville, Pa.	

The Coal Programme for '75.

THERE is to be a very important meeting of the great coal companies in December, with the object of discussing the condition of the trade, and, probably, arranging for a general reduction of wages at the anthracite mines. This appears to be a necessity at the present time; for, while wages in every other industry have been heavily reduced, our anthracite miners have continued to receive as much as they received two years ago, and are making from $4 to $5 per day at many of the mines. The men will undoubtedly oppose any reduction, using as an argument that the coal has been sold at higher prices than last year, and they are consequently entitled to higher wages; and, moreover, that during a great part of this year they have had work but four days in the week, and that their income, distributed over the full number of working days, does not average near the amount they get credit for receiving.

We do not apprehend a strike, however, for the companies are so powerful they can dictate any reasonable terms, and the men know well that if they do not accept even a very considerable reduction in wages, there are many unemployed men throughout the country ready to take their places; and in the bituminous coal, and in the ore mines, no such wages are being paid as they receive. We fully recognize the necessity for a lower scale of wages.

But this is not all, Imperial Six!

Railroad charges should be largely reduced, and the selling price of coal, the coming season, should be fixed at a much lower standard. The general manufacturing industries of the country would be largely benefited by cheaper coal, which means cheaper anthracite; for bituminous coal has been selling throughout the year at a price which left but small profits to the mining companies, while anthracite has been higher than for many years past.

It will be but repeating the admitted mistake of this year to assume the depression in trade to be merely the result of a temporary panic, and that after the conventional "ninety days" things will be brisk again. Trade is scarcely even now at its lowest, and its revival will be very gradual. Cheap fuel will contribute largely to this revival, and, by increasing consumption, will enable the companies to work more steadily, reducing the cost at the mines, and the larger amount transported will make up to the railroad companies for a heavy reduction in their charges.

Coking Anthracite.

SOME anthracites decrepitate in the fire to such a degree as to unfit them for blast furnace use. The following method of coking can then be used with advantage, though it appears to us somewhat expensive. M. DE CHAVIGNE, the Chemist of the Terre Neuve Works, has invented a special furnace for the above purpose. He found that when anthracite in powder was mixed with a small proportion of coal, pitch, tar or peat, coke was produced having all the qualities of that made from ordinary coal. The coke made from anthracite which decrepitates, is free from that peculiarity in the fire. This anthracite coke cannot, however, be made in the ordinary ovens without the addition of a large quantity of the agglomerating substances above named to furnish the necessary gases for the required heat. M. DE CHAVIGNE'S furnace has a gazogène in which small wood, peat, lignite, refuse coke, or anthracite is burnt. The retorts may be of iron or fireclay, or formed simply of bricks, with the sides here and there connected with the general masonry of the furnace. In the center of the construction is the gazogène, or fire hole, with or without blast, and around this are from eight to sixteen retorts within square brick walls, and four chimneys, one at each corner, with registers regulating the force of the fire, and consequently the heat of each fire.

The Cause of the Large Runs at the Lucy and Isabella Furnaces.

From the *American Manufacturer*.

THE wonderful increase in the make of iron at the Isabella and Lucy furnaces, in this city, is of more importance than the bare figures indicate. These in themselves are surprising. If there were no other result than the mere pleasure of reading that these furnaces had made respectively 651 and 653 tons of iron it would be a matter of no small congratulation to us as Americans to know that we had surpassed the world in the number of tons of iron made in a week, and had done so, not alone at one furnace, nor only for a week. The better signification of it is, we trust, that we have begun a new era in blast furnace practice, that our furnacemen have discovered how it is possible to get larger results from furnaces, without any injury to the furnaces, than has heretofore been thought possible.

Previous to being rebuilt, a few months since, the largest week's run ever reached by the Isabella was 498 tons. Here is an increase of over 30 per cent. in the make of this furnace. The average make for the last eight weeks has been over 617 tons. So with the Lucy. Its largest week's run heretofore has been 598 tons. The past two weeks it has made 642 and 653 tons.

These are results that may well cause furnacemen to ask how has it been accomplished? At the Isabella, part is due to the change in the internal shape of the furnace. The old shape was that of truncated cones resting upon a cylinder, or, in other words, the boshes were straight for a few feet. We do not know just what shape has been adopted in the relining, but we do know that the straight boshes have been discarded and the interior is simply two truncated cones base to base. This has reduced the interior dimensions some 1100 cubic feet, which makes the yield all the more remarkable.

Then, too, something may be due to the quality of materials used. The large demand for Lake ore last year led to the shipment of much that was inferior in itself, and much that had mixed with it quartz, greenstone, etc. In many instances this so injured the ore that large discounts were allowed on the contract price, and in one case, at least, a large sum of money was paid as damages. Within a few weeks or months, the constant and loud complaints of our furnacemen have effected a change, and the ore is now of a very good quality. So, too, coke has been so cheap that the Isabella has been using the very best Connellsville coke. In fact, in this respect this furnace has had everything that could be asked.

While these things are true of the Isabella they do not explain so completely the work done at the Lucy. There has been no change in the shape of this furnace for months, and some of the stock, especially the coke, owing to the lack of water at the ovens for washing, has been inferior.

There is one point, however, in which the practice at both furnaces has been changed, and in which they both agree, viz.: the heat and pressure of the blast. The ordinary practice at coke furnaces in this vicinity is to heat the blast from 700° to 900° F., and to run with a pressure of from 3½ to 5 lb. These furnaces have been using fully 8 lb. pressure, and over 1000° (F.) heat. We give these facts and allow furnacemen to draw their own conclusions.

There is one point, however, to which we wish to direct especial attention, and that is the rapid descent of the stock, or, in other words, the small number of cubic feet internal capacity to the ton of iron yielded in twenty-four hours. In the English furnaces this has varied. The following table will show to what extent:

Old Clarence, 1853	195	cubic feet.
Eighty feet Clarence, 1866	300	"
Ormesby, 1867	320	"
Consett	160	"
Consett, No. 4	170	"

Taking the average make of the Isabella furnace for the past eight weeks a eighty-eight tons per day, we would have *one ton of iron made in every twenty-four hours to every 133 cubic feet internal capacity.*

The further action of these furnaces will be looked to with the greatest interest, and if it shall be shown that the work done has not been done at the expense of the furnace and machinery, it will be a source of the greatest congratulation.

A correspondent of the *Iron Age* gives the following remarkable furnace record: The Société Anonyme des hauts Fourneaux, Esch sur l'Alzette, Luxemburgh, have constantly made during the past twelve months between 700 and 770 tons per week in one stack, 65 feet high, by 24 feet bosh, using without fluxes the uncalcined, small, dusty "minette," or calcareous superficial ore, peculiar to the district, yielding only about 32 per cent. metallic iron. The coke is made from the coal of the Charleroi basin, and contains from 8 to 12 per cent. of ash. The blast is two and a half pounds, conveyed to the furnace through four 8-inch nozzles. The temperature of the blast is 1400° Fahr. at the tuyeres, and is gained by the use of hot blast stoves on the Whitwell system. The amount of coke used is 20¼ cwt. to the ton of iron. In every case where I have used the word ton I mean 2240 lb. The bosh of this furnace is certainly wide than that of the Lucy, but they don't have Lake Superior ores.

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CONTENTS FOR THIS WEEK.

The Fair of the American Institute	289	CORRESPONDENCE :	
The Iron Ores of Sweden	290	Gold Mines of Tolima, U. S. of Colombia	294
The Growth of the Iron Trade in France	290	Important Discovery of Coal at Lasalle, Illinois	294
Important Discovery of Silver and Gold Ore in Nevada	291	COAL TRADE REVIEW	294
Lake Superior Ore Trade	291	Review of the British Coal and Iron Trade	297
Notes	291	IRON MARKET REVIEW	297
EDITORIALS :		Metals	298
The American Institute of Mining Engineers	292	Miscellaneous Stock Market	298
The Coal Programme for '75	293	Boston Stock Market	298
Coking Anthracite	293	San Francisco Stock Market	298
The Cause of the Large Runs at the Lucy and Isabella Furnaces	293	American Institute of Mining Engineers	298
Miners' National Association	294	Advertisements	299

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BEFORE the opening session of Tuesday evening, October 27, the proceedings of which were given in our last number, a large number of members and visitors made a visit to the Laurel Hill colliery—No. 2 of the Hazleton slopes. This colliery is owned by the Lehigh Valley Railroad Co., and operated by A. PARDEE & Co., lessees, Mr. CALVIN PARDEE being the superintendent. The party, guided by Mr. THOMAS DICKERSON, the underground foreman, went a mile and a quarter through the mine, including a ride of about 1500 yards underground with one of the small locomotives here in use. The same afternoon, before returning to Hazleton, the party visited the shops of the Lehigh Valley Railroad Co., where they were received by Mr. DAVID CLARK, the master mechanic. In these shops all the machinery for both the mines and the railroad is constructed, including engines, pumps and locomotives.

EXCURSIONS OF WEDNESDAY.

On Wednesday morning the Institute left Hazleton by special train, under the guidance of Mr. H. S. GOODWIN, assistant superintendent of the Lehigh Valley road, and visited the coal-basins of Big Black Creek, Cross Creek and Upper Lehigh. The weather was perfect ; and the picturesque valleys and wooded hillsides of the country still retained sufficient of their autumn glory to blend with the hazy atmosphere into a charming picture. The collieries of COXE BROTHERS & Co. at Cross Creek and Woodside were first visited, and the arrangement of slopes, breakers, tramways, etc , was inspected under the courteous guidance of Mr. ECKLEY B. COXE and Mr. ARTHUR MCCLELLAN, the superintendent. From Woodside, a long procession of carriages conveyed the merry company to Upper Lehigh, where Messrs. DANIEL BERTSCH, superintendent, SAMUEL PRICE, agent, and THOMAS M. RIGHTER, mining engineer and assistant superintendent, of the Upper Lehigh Coal Co., were in waiting to receive them and show them the sights of the locality. After a brief stay at this point, the ride was continued to the summit just beyond, where, by dismounting from their carriages and walking a few yards through the forest, the travellers arrived at Prospect Rock, from which point a wide and magnificent view was obtained, ranging many miles in extent, and comprising the outcrops of the successive measures of the coal region, to the mountains on the south side of Wilkes-Barre, on the Susquehanna. After visiting a new slope now sinking, by the Upper Lehigh Co , in solid rock, with the aid of the Ingersoll power drill, the party proceeded to Drifton, where they were sumptuously entertained at the residence of Judge CHARLES S. COXE. After dinner, the railway cars were resumed, and, passing Jeddo, (colliery of G. B. MARKLE & Co.), the train made a brief stop at Ebervale, where the handsome and extensive colliery of which Mr. WM. J. HARRIS is superintendent, received attention. Mr. HARRIS had got out of the mine, in honor of the visit, a solid lump of coal, almost without a trace of slate, cubical in shape and weighing 2½ tons. In connection with this colliery, much interest was attracted by a canal, dug for the purpose of draining a large swamp, under which it is desired to extend the underground workings. This canal has been dug for more than two miles by a steam-dredge, mounted upon a scow. A pit being first dug and filled with water, the scow was launched in it, and has since gone ahead, first excavating, and then navigating, its own canal. At the neighboring colliery of the Lattimore Co., Gen. PARDEE, of PARDEE BROTHERS & Co., the lessees, and Mr. M. M. COOPER, superintendent, showed the party another canal excavated by hand for a similar purpose. In this case, it is said, by the employment of cheap Italian labor, the work was done (in frightfully muddy ground) for 50 to 60 cents per cubic yard ; whereas it is claimed that, aside from the first cost of the machinery ($5000 to $6000), all the expenses of dredging a canal would be comprised in the sum of 10 cents per cubic yard. The excursion was continued to the Milnesville colliery (Stout Coal Co. lessees ; WM. J. HARRIS, superintendent) and so, past the Stockton colliery, back to Hazleton. There was, unfortunately, not time to visit the Hollywood colliery, just west of Milnesville, (CALVIN PARDEE & Co. lessees)—a new enterprise, in the prosecution of which a singular plication has been encountered in the Mammoth vein, giving to this colliery two overlaps, or three thicknesses, (in all, some 120 feet thickness) of the vein.

SECOND SESSION, WEDNESDAY EVENING, OCTOBER 28.

After the election of new members and the usual business announcements, the following papers were read and discussed :

Prof. J. C. SMOCK, New Brunswick, N. J., on Mining Clay.

Mr. E. C. PECHIN, of Dunbar, Pa., on The Iron Ores and Products of Southwestern Pennsylvania.

Mr. OSWALD J. HEINRICH, of Midlothian, Va., a Supplementary Paper on Deep Boring with the Diamond Drill.

Mining Councilor Dr. J. BURKART, of Bonn, Germany, on The Mining Statistics of Austria.

President RAYMOND exhibited very beautiful specimens of wulfenite (molybdate of lead) from the Tecoma mine in Nevada ; also, a specimen of green fluorspar from Zinnwald, Bohemia, in which cubic crystals were combined into distinctly octahedral aggregates.

Mr. G. L. BRADLEY, of Providence, R. I., exhibited specimens of the steel containing 0·3 of phosphorus, manufactured by the Martin process at Terre-noire, in the South of France, by the aid of ferro-manganese, instead of spiegeleisen. The samples included some taken before, and some after, the addition of the ferro-manganese ; also, a piece of rail.

EXCURSIONS OF THURSDAY, OCT. 29.

Thursday morning, at 9:30, the Institute went by special train to Crystal Ridge, a colliery worked by A. PARDEE & Co., on the Cranberry estate. Here a new slope is sinking, and a large breaker, which was begun Sept. 1, is already inclosed, and part of the machinery is in place—a remarkable instance of quick work. Close by, the outcrop of the coal is beautifully exposed, in the "cave" between the old Laurel Hill works and the Crystal Ridge basin. The Mammoth vein, with a thickness of thirty feet, comes to the surface in a sharp anticlinal, and plunges again into the depths.

Returning from this trip, the Institute left Hazleton at 10:30 for Mauch Chunk, where a lunch was provided in the capacious dining-room of the Mansion House, after which carriages and omnibuses conveyed the party to the experimental works of Mr. E. F. LOISEAU, the inventor and manufacturer of the artificial fuel which bears his name. Here the whole process of manufacturing anthracite coal dust, with 5 per cent. of clay, into hard, compact, oblate spheroidal pieces of fuel, and the dipping of these, to render them water-proof, in a benzine solution of resinous matter, was performed to the great interest and satisfaction of the spectators. At the hotel, a grate filled with LOISEAU's patent fuel presented, without replenishing or stirring, a glowing and uniform fire from 9 A. M. to late in the night ; and at 10 on the following morning, it was not yet burnt out. The egg-shaped pieces retain their form to the last, seeming, when entirely burned, balls of ashes, which can be crumbled in the hand. There is no sign of clinker about this fuel.

A train in waiting on the Switchback conveyed the party to Summit Hill, whence they proceeded on foot to the old collieries and open pits where anthracite was first mined for market, and obtained, from some of the colossal waste-dumps, magnificent views of the coal-basin below. Near slope No. 8, a railway-train received them, and transported them through the Nesquehoning tunnel, back to Mauch Chunk. A brief visit was made *en route* at the works of the Lehigh Coal Washing Company, where all the coal from this district is broken and cleaned from slate in jigs. The machines in use are BRADFORD's and PLUMB's, of which the latter is preferred, especially for the larger sizes.

Dinner at Mauch Chunk was served at 7 o'clock.

SESSION OF THURSDAY EVENING, OCTOBER 29.

After the usual announcements and election of new members, a resolution was unanimously passed, instructing the officers of the Institute to present thanks to the citizens of Hazleton, the proprietors of collieries and other works, the Lehigh Valley and Central New Jersey railroads, and the efficient Local Committee, for the arrangements which had secured so successful a meeting. The following papers were then read and discussed :

Mr. WILLIAM A. SWEET, of Syracuse, N. Y., on a Gas Re-heating Furnace ;

Prof. T. STERRY HUNT, Notes on the Hoosac Tunnel ;

Mr. R. P. ROTHWELL, on a Method of Topographical Surveying ;

Mr. R. W. RAYMOND, on the Gold and Silver Product of the United States ;

Mr. THOS. S. MCNAIR exhibited a specimen of anthracite which had been altered to resemble cannel coal, by the effect of the discharge-steam from a pump.

Prof. B. W. FRAZIER exhibited a specimen of sal ammoniac, crystallized upon a brick, from a gas flue of one of the blast-furnaces at Glendon, Pa.

A paper by Prof. FRAZIER was read by title, on the Economy of the Blast-Furnace, after which, with a few congratulatory words from the President, the Institute was adjourned to the next meeting, in February.

EXCURSIONS OF FRIDAY, OCTOBER 30.

In spite of the adjournment of the night before, some fifty of the members reported themselves in the morning for an excursion to Hockendauqua (Thomas Iron Co.), the Fogelsville R. R., the Ziegler and other hematite mines, and finally to Bethlehem, where, after a grand public dinner, they visited the superb works of the Bethlehem Iron and Steel Company, viewing the Bessemer plant in full operation, and the interesting establishment of the Lehigh Zinc Company. Mr. JOHN FRITZ, of the former company, and Mr. B. C. WEBSTER, of the latter, received their visitors with a courtesy born of native character and perfected by long and unremitting exercise. From Bethlehem the members were scattered in various directions, seeking their respective homes.

List of Members and Associates elected at the Hazleton meeting:

W. M. HABIRSHAW, New York City.	ORRIN C. FROST, Watertown, N. Y.
P. W. SHEAFER, Pottsville, Pa.	JOHN COLLETT, Newport, Ind.
D. K. FERGUSON, St. Louis, Mo.	D. E. GARRISON, St. Louis, Mo.
REGIS CHAUVENET, St. Louis, Mo.	ANDREW ROY, Columbus, Ohio.
ELLIS CLARK, Jr., Easton, Pa.	I. M. ST. JOHN, Quinnimont, W. Va.
S. MORRIS, Quinnimont, W. Va.	ABRAHAM S. SCHROPP, Bethlehem, Pa.
H. MARTYN CHANCE, Philadelphia, Pa.	MOSES STRONG, Mineral Point, Wis.
E. T. SWEET, Madison, Wis.	H. C. HOPPER, Newark, N. J.
W. C. ROSS, New York City.	A. F. SCHNEIDER, New York City.
JOHN H. DEWEES, Pottsville, Pa.	C. H. NIMSON, Allentown, Pa.
G. L. BRADLEY, Providence, R. I.	Prof. J. L. MORRIS, Ithaca, N. Y.
J. B. WALKER, Charleston, W. Va.	Dr. J. BURKART, Bonn, Germany.
J. C. HAYDEN, Jeansville, Pa.	WM. LANDER, Riddlesburg, Pa.
W. GALIGHER, Bingham City, Utah.	Dr. W. BREDEMEYER, Bingham City, Utah.
W. E. C. COXE, Reading, Pa.	THOS. WHITWELL, Stockton-on-Tees, Eng.
GEO. H. REYNOLDS, New York City.	JOSEPH P. SILLYMAN, Hazleton, Pa.
JOHN GRIFFEN, Phœnixville, Pa.	

The Coal Programme for '75.

THERE is to be a very important meeting of the great coal companies in December, with the object of discussing the condition of the trade, and, probably, arranging for a general reduction of wages at the anthracite mines. This appears to be a necessity at the present time; for, while wages in every other industry have been heavily reduced, our anthracite miners have continued to receive as much as they received two years ago, and are making from $4 to $5 per day at many of the mines. The men will undoubtedly oppose any reduction, using as an argument that the coal has been sold at higher prices than last year, and they are consequently entitled to higher wages; and, moreover, that during a great part of this year they have had work but four days in the week, and that their income, distributed over the full number of working days, does not average near the amount they get credit for receiving.

We do not apprehend a strike, however, for the companies are so powerful they can dictate any reasonable terms, and the men know well that if they do not accept even a very considerable reduction in wages, there are many unemployed men throughout the country ready to take their places; and in the bituminous coal, and in the ore mines, no such wages are being paid as they receive. We fully recognize the necessity for a lower scale of wages.

But this is not all, Imperial Six!

Railroad charges should be largely reduced, and the selling price of coal, the coming season, should be fixed at a much lower standard. The general manufacturing industries of the country would be largely benefited by cheaper coal, which means cheaper anthracite; for bituminous coal has been selling throughout the year at a price which left but small profits to the mining companies, while anthracite has been higher than for many years past.

It will be but repeating the admitted mistake of this year to assume the depression in trade to be merely the result of a temporary panic, and that after the conventional "ninety days" things will be brisk again. Trade is scarcely even now at its lowest, and its revival will be very gradual. Cheap fuel will contribute largely to this revival, and, by increasing consumption, will enable the companies to work more steadily, reducing the cost at the mines, and the larger amount transported will make up to the railroad companies for a heavy reduction in their charges.

Coking Anthracite.

SOME anthracites decrepitate in the fire to such a degree as to unfit them for blast furnace use. The following method of coking can then be used with advantage, though it appears to us somewhat expensive. M. DE CHAVIGNE, the Chemist of the Terre Neuve Works, has invented a special furnace for the above purpose. He found that when anthracite in powder was mixed with a small proportion of coal, pitch, tar or peat, coke was produced having all the qualities of that made from ordinary coal. The coke made from anthracite which decrepitates, is free from that peculiarity in the fire. This anthracite coke cannot, however, be made in the ordinary ovens without the addition of a large quantity of the agglomerating substances above named to furnish the necessary gases for the required heat. M. DE CHAVIGNE'S furnace has a gazogène in which small wood, peat, lignite, refuse coke, or anthracite is burnt. The retorts may be of iron or fireclay, or formed simply of bricks, with the sides here and there connected with the general masonry of the furnace. In the center of the construction is the gazogène, or fire hole, with or without blast, and around this are from eight to sixteen retorts within square brick walls, and four chimneys, one at each corner, with registers regulating the force of the fire, and consequently the heat of each fire.

The Cause of the Large Runs at the Lucy and Isabella Furnaces.

From the *American Manufacturer*.

THE wonderful increase in the make of iron at the Isabella and Lucy furnaces, in this city, is of more importance than the bare figures indicate. These in themselves are surprising. If there were no other result than the mere pleasure of reading that these furnaces had made respectively 651 and 653 tons of iron it would be a matter of no small congratulation to us as Americans to know that we had surpassed the world in the number of tons of iron made in a week, and had done so, not alone at one furnace, nor only for a week. The better signification of it is, we trust, that we have begun a new era in blast furnace practice, that our furnacemen have discovered how it is possible to get larger results from furnaces, without any injury to the furnaces, than has heretofore been thought possible.

Previous to being rebuilt, a few months since, the largest week's run ever reached by the Isabella was 498 tons. Here is an increase of over 30 per cent. in the make of this furnace. The average make for the last eight weeks has been over 617 tons. So with the Lucy. Its largest week's run heretofore has been 598 tons. The past two weeks it has made 642 and 653 tons.

These are results that may well cause furnacemen to ask how has it been accomplished? At the Isabella, part is due to the change in the internal shape of the furnace. The old shape was that of truncated cones resting upon a cylinder, or, in other words, the boshes were straight for a few feet. We do not know just what shape has been adopted in the relining, but we do know that the straight boshes have been discarded and the interior is simply two truncated cones base to base. This has reduced the interior dimensions some 1100 cubic feet, which makes the yield all the more remarkable.

Then, too, something may be due to the quality of materials used. The large demand for Lake ore last year led to the shipment of much that was inferior in itself, and much that had mixed with it quartz, greenstone, etc. In many instances this so injured the ore that large discounts were allowed on the contract price, and in one case, at least, a large sum of money was paid as damages. Within a few weeks or months, the constant and loud complaints of our furnacemen have effected a change, and the ore is now of a very good quality. So, too, coke has been so cheap that the Isabella has been using the very best Connellsville coke. In fact, in this respect this furnace has had everything that could be asked.

While these things are true of the Isabella they do not explain so completely the work done at the Lucy. There has been no change in the shape of this furnace for months, and some of the stock, especially the coke, owing to the lack of water at the ovens for washing, has been inferior.

There is one point, however, in which the practice at both furnaces has been changed, and in which they both agree, viz.: the heat and pressure of the blast. The ordinary practice at coke furnaces in this vicinity is to heat the blast from 700° to 900° F., and to run with a pressure of from 3½ to 5 lb. These furnaces have been using fully 8 lb. pressure, and over 1000° (F.) heat. We give these facts and allow furnacemen to draw their own conclusions.

There is one point, however, to which we wish to direct especial attention, and that is the rapid descent of the stock, or, in other words, the small number of cubic feet internal capacity to the ton of iron yielded in twenty-four hours. In the English furnaces this has varied. The following table will show to what extent:

Old Clarence, 1853	195	cubic feet.
Eighty feet Clarence, 1866	300	"
Ormesby, 1867	320	"
Consett	160	"
Consett, No. 4	170	"

Taking the average make of the Isabella furnace for the past eight weeks a eighty-eight tons per day, we would have *one ton of iron made in every twenty-four hours to every* 133 *cubic feet internal capacity.*

The further action of these furnaces will be looked to with the greatest interest, and if it shall be shown that the work done has not been done at the expense of the furnace and machinery, it will be a source of the greatest congratulation.

A correspondent of the *Iron Age* gives the following remarkable furnace record: The Société Anonyme des hauts Fourneaux, Esch sur l'Alzette, Luxemburgh, have constantly made during the past twelve months between 700 and 770 tons per week in one stack, 65 feet high, by 24 feet bosh, using without fluxes the uncalcined, small, dusty "minette," or calcareous superficial ore, peculiar to the district, yielding only about 32 per cent. metallic iron. The coke is made from the coal of the Charleroi basin, and contains from 8 to 12 per cent. of ash. The blast is two and a half pounds, conveyed to the furnace through four 8-inch nozzles. The temperature of the blast is 1400° Fahr. at the tuyeres, and is gained by the use of hot blast stoves on the Whitwell system. The amount of coke used is 20¼ cwt. to the ton of iron. In every case where I hav used the word ton I mean 2240 lb. The bosh of this furnace is certainly wide than that of the Lucy, but they don't have Lake Superior ores.

CORRESPONDENCE.

Gold Mines of Tolima, U. S. of Colombia.

CHAPPAREL, TOLIMA, U. S. OF COL. }
September 10, 1874. }

TO THE EDITOR: SIR—The mining region of the Saldaña River is enclosed in an area shaped like a V, with its gorge, or opening, to the north; the west side is formed by the central Andes; the east by the spur of Sierras that, branching from the central Andes, trends East and North, and divides the great valley of the Magdalena from the mining district of which we treat. At the apex of the V rises the Paramos of Barrançon, and there is the source of the Saldaña river, which, uniting all the lateral rivers of drainage, finally joins the Magdalena at the point where the last of the spur, or range, slopes to the great plains of El Guamo. The mines now "denounced and working" are those at Ortega, called Coyaima mines, (from the fact that the town of Coyaima is quite near, on the opposite bank of the river, while the town of Ortega is some distance.) These mines are directed by Major BARNEY, of New York. They have a "double chief" hydraulic, and will have it mounted in a few months. The next mine, as we go up the river, is called Alpone; it is claimed now by WM F. SHEFFIELD, of Ohio. The mine is quite promising and has paid well in the rainy season; with machinery and water it will produce good results. The next two mines are between the river and the Andes, and are situated on a large stream called Irco. The mines are called Ventarosa, owned by LOSANO & GILBERT, of Conn., and the Guacamaya, owned by the Central Andes Mining and Improvement Company, of New York. These two are the best looking mines for the expense of opening, as water in abundance, with fall enough for machines, is within a few hundred yards. Dry panning in Ventarosa gave in eight pans the sum of four and a half castillaños ($2 40 per c.) The Guacamaya has a wide belt of "blue gravel," which gives good prospects on the surface, but as yet the bed rock (slate) has not been reached. The pans run two to three reals each surface. This mine has its southeast boundary on the mine of Los Angeles, owned by BAKER & NOBLE, of New York, which is an old Spanish mine, abandoned during the Revolution. Tradition says it is quite rich.

The next and the largest of the Colombian mines is the Guanabino, discovered by GILBERT in 1873; it is owned by him and A. LÜDERITZ, of Bremen. The gravel is in a chain of hills and has 700 feet pay in many places. They are putting up houses and planting coffee, &c., for the use of the mine, while waiting for machinery. Above here are other mines owned and controlled by the Central Andes Company, of New York, which are still undeveloped.

We have four iron bridges, just arrived, for the river between Honda and here. The telegraph is being extended daily, and we are confident of Tolima yet; she is to be the California of South America in the due course of time.

Two hydraulics were sent up the river last week to mines near Nieva. I have not seen the mines and can say nothing. I go to visit them soon and will report. All here in the Saldaña valley are Americans, and we hope to infuse a little Yankee energy in the business of the hitherto dormant gold mining of this country. All are well and hopeful.

Yours, &c., MINER.

Important Discovery of Coal at Lasalle, Ill.

CENTRALIA, ILL., Oct. 29, 1874.

TO THE EDITOR: SIR—Although deprived, by unavoidable circumstances, of the pleasure of meeting with you and the Institute, I am to-day placed in a position to communicate to you a fact which is of considerable practical interest. A bed, 6 to 7 feet thick, of good quality of coal (evidently the Belleville-Duquoin vein) has been struck to-day in a shaft sunk at Centralia, on the Illinois Central Railroad, at a depth of 560 feet, 30 miles East and 22 miles North of the nearest coal mines working on the same vein, which is the only vein in this part of the State of more than purely local and very small importance. There is no reason now to doubt that the Illinois and Indiana fields connect continuously from East and West, and not merely at the rim of the basin. From careful detailed surveys of several of the adjoining counties, as Assistant Geologist of Illinois, I had predicted, ten years ago, that if this vein of coal extended thus far, it might be expected at a depth of between 560 and 640 feet. Mr. WORTHEN, the State Geologist, could not see the strength of my argument, and stated in his report that this vein of coal would be found not much over 300 feet deep. On the strength of his argument the citizens of Centralia sank a shaft, but, not finding the coal at that depth, remembered my prediction, and came to me for advice. Their funds having all been "sunk" in the shaft, they raised an additional amount upon my suggestion, with the above result. Although I have not received particulars, I am satisfied that this stratum is the equivalent of the Belleville and Duquoin seam of bituminous coal, the vein which furnishes most of the coal used in St. Louis. Mr. WORTHEN considers these two veins as distinct, but I have never been able to see it. F. ENGELMANN.

Miners' National Association.

CLEVELAND, Oct. 29.—The Miners' National Association re-assembled to-day, President SINEY in the chair. WILLIAM THOMPSON, of Ohio, was selected for first Vice-President, and D. A. JONES, of Ohio, for Secretary. The other vice-presidents will be chosen by the State Associations. The Committee on Co operation presented a report, in which they suggest that petitions be sent to the National Congress and State Legislatures, asking for charters for one or more collieries, to be conducted on purely co-operative or industrial partnership principles. The Committee on Printing reported, recommending the publication by the Association of a monthly journal in the interests of the miners. The President stated that the reason he had not visited Bethel, Pennsylvania, during the recent troubles there, was, that he had previous engagements which he could not postpone. The committee appointed to consider the alleged differences between the Miners' National Association and the Miners' and Laborers' Benevolent Association, of Schuylkill, Pa., made a report, which was adopted, looking to the settlement of all differences between the Associations. After further business of interest only to the Association, the Convention adjourned *sine die*.

Record of New Railroad Construction.—We take from our able contemporary, the *Railroad Gazette*, the following:

"EAST BROAD TOP.—This road, of 3-feet gauge, is extended from Orbisonia, Pa., southwestward 20 miles to Robertsdale. BALTIMORE, PITTSBURGH AND CHICAGO.—Extended from Avilla westward 10 miles to Albion, Ind. FLINT AND PERE MARQUETTE.—Extended westward 13 miles to a point 28 miles west of Reed City, Mich. GALENA AND SOUTHERN WISCONSIN.—Track has been laid (of 3-feet gauge) from Galena, Ill., westward 9 miles. TEXAS AND PACIFIC.—Extended from Dallas west 10 miles to Eagle Ford, Texas.

"This is a total of 62 miles of new railroad, making 1,242 miles completed in the United States in 1874, against 2,955 miles reported for the same period in 1873, and 5,312 in 1872."

COAL TRADE REVIEW.

Import Duty on Coal.

Anthracite free. *Bituminous*, per ton of 28 bushels, 80 lb. o the bushel, 75c., gold.

All *slack*, or *culm*, such as will pass through a half-inch screen, per ton of 28 bushels, 80 lb. per bushel, 40c., gold.

Not otherwise provided for, per ton, 40c. gold.

This is the only report published that gives full and accurate returns of the production of our Anthracite mines.

NEW YORK, Nov. 6, 1874.

The Production of Anthracite Coal for the week ending Oct. 31, 1874, was as follows:

Tons of 2240 lb.	WEEK. Tons.	YEAR* Tons.
Wyoming Region.		
Delaware and Hudson Canal Co	58,603	1,991,960
Delaware, Lackawanna and Western R.R	63,028	2,161,888
Pennsylvania Coal Co	30,377	1,116,647
Lehigh Valley R.R	19,292	795,300
Pennsylvania and New York R.R	1,889	52,948
Central Railroad of New Jersey	44,197	1,240,251
Sold at the mines by L. & W. C. Co	....	17,403
	217,386	7,316,397
Lehigh Region.		
Lehigh Valley R.R	77,932	2,674,308
Central Railroad of New Jersey	36,890	987,891
Danville, Hazleton & W. B.B.R.,	845	35,197
	115,667	3,699,396
Schuylkill Region.		
Philadelphia and Reading R.R	183,612	4,410,989
Shamokin and Lykens Valley	16,180	777,767
	199,792	5,188,756
Sullivan Region.		
Sullivan and Erie R.R	609	30,449
Total of all the regions	532,454	16,234,998

* Year beginning Jan. 1.

The following table does not give the entire production of our bituminous mines, but it is by far the fullest report published.

The Production of Bituminous Coal for the week ending Oct. 31, was as follows:

Tons of 2000 lb., except where otherwise designated.

	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Tons of 2240 lb	52,781	2,025,098
Barclay Region, Pa.		
Barclay R.R. tons of 2240 lb	5,575	253,362
Broad Top Region, Pa.		
Huntingdon & Broad Top R.R	5,096	190,466
Clearfield, Region, Pa.		
Snow Shoe	1,238	50,007
Tyrone and Clearfield	14,556	522,818
Allegheny Region, Pa.		
Pennsylvania R.R	3,003	172,918
Pittsburgh Region, Pa.		
West Penn. R.R	3,852	163,102
Southwest Penn. R.R	185	6,473
Penn and Westmoreland gas coal, Pa. R.R.	15,881	738,983
Pennsylvania R.R	11,385	386,169
Kanawha Region, W. Va. to Oct. 24.		
Chesapeake and Ohio R.R	3,093	113,819
Shipments from *Block House Region, N. S.*, to Oct. 21.		
Consigned to the Provinces tons 2240 lb	301	13 202
" " " United States " " "	447	14,420
" " Cuba " " "	571	....
Shipments from *Pictou Region, N. S.*, to Oct. 24.		
Consigned to the United States tons 2240 lb.	....	46,976
" " " West Indies " " "	....	9,763
" " Canada " " "	2,425	96,115
" " Other provinces " " "	1,855	65,399
" " South America " " "	664	664

The Production of Coke for the week ending Oct. 31.

Tons of 2000 lb.

	Tons.	Year. Tons.
Tyrone and Clearfield	38	699
West Penn. R.R., " " " " "	336	12,986
Southwest Penn. R.R " " " " "	10,596	345,392
Gas Coal, Penn. R.R. " " " " "	1,350	32,450
Pittsburgh Coal, Penn. R.R. " " " "	1,392	56,325

The production of Anthracite for the week ending Oct. 31st was as follows: Wyoming Region 217,386 tons, being 11,028 tons more than the preceding week. In the Lehigh region, 115,667 tons, or 4,324 tons more than the week before, and in the Schuylkill region, 199,792 tons, being 5,597 tons less than the preceding week.

The total production of Anthracite from all the regions was for the week 533,454 tons, as against 523,585 tons the preceding week, (or an increase of 9,871 tons), and 365,255 tons for the corresponding week last year. From January 1st to Oct. 31st, there were produced 16,234,998 tons, as against 17,052,558 tons for the same period last year. The figures of last year's production are taken from the Pottsville *Miners' Journal*.

The production of Cumberland coal from January 1 to Oct. 31, inclusive, was 1,936,352 tons of 2240 lb., against 2,114,547 tons to the corresponding date in 1873. The production for the week was 50,388 tons, as compared with 61,386 tons for the corresponding week in 1873. This is a total decrease for the week of 10,998 tons as compared with 1873, and for the year, thus far, of 178,195 gross tons.

The receipts at Port Richmond were 64,000 tons; shipments, 63,000 tons; and balance on hand 95 000 tons.

Returns from Greenwich, Philadelphia:

	Bituminous.	Gas Coals.
Receipts	4,100	1,175
Shipments	4,065	1,135
On hand	1,644	58

	week.	year 1874.	year 1873.
The receipts of coal at Coal Port (Trenton)	7,345	240,565	303,670
" " " South Amboy	12,129	529,951	400,880
Shipments at Coal Port (Trenton)	8,219	241,507	307,305
" South Amboy	11,408	532,845	389,835

The receipts of coal by the Michigan Southern RR. at Buffalo for the week were 5,871 tons. Receipts by Lake, 230 tons. The shipments by Lake, 5,842 tons.

The following statement of the stock of Cumberland coal at Georgetown will be of interest to many of our readers :

American	16,000
Atlantic and Blue Avon	4.000
Hamp. and Balt	2,000
Consolidation	2,500
Maryland	3,500
Borden	1,000
Total	29,000

Production of Bituminous Coal. 1874.

Tons of 2000 lb.	8 months.	Sept.	9 months.
Blossburgh Region	538,751	92,700	631.451
Barclay Region	223,525	36,140	259,665
Broad-Top Region	154,941	19,516	174,457
Cumberland Region	1,681,033	261,750	1,942,783
Clearfield Region	450,483	57,216	507.699
Alleghany Region	144,020	14,834	158,854
Pittsburgh Region.			
West Penn. RR.	130,179	15,292	146,471
Southwest Penn. RR.	4,879	601	5,480
Gas Coal, Penn. RR.	616,505	50,309	676,814
Pittsburgh Coal, Penn. RR.	297,155	47,580	344,735
Saw Mill Run RR.	68,957		68,957
Cleveland and Pittsburgh RR.	172,419	25,535	197,904
Pittsburgh, Cincinnati and St. Louis R'y	404,175	26.865	431,040
Erie and Pittsburgh RR.	167,354	34,209	201,563
Pittsburgh, Fort Wayne and Chicago RR.	146,720	12,653	159,373
Castle Shannon RR.	81,530	6,371	87,901
Pittsburgh and Connellsville RR	262,373	33,732	296,105
Monongahela Nav. Co.	1,835,109	13,547	1,848,656
Keeling & Co	128,805	11,209	140,014
Wettengal & Gormley	7,689	1,896	9,585
St. Louis Region.			
Tenn. Coal & R.R. Co. to Aug. 1.	51,728	..	..
St. L. A. & T. H. R. R. Belleville Branch	112,799	..	..
B. & S. I. R.R.	63,940	..	..
Illinois and St. Louis	1,393	212	1,605
Indiana North and South RR.	3,336	..	..
Evansville & Crawfordsville RR	9,305	1,684	10,989
Kanawha Region.			
Chesapeake and Ohio RR.	94,465	12,144	106,609
Warrior Region, Ala.			
South and North Alabama RR.	14,585	1,875	16,460
Cahaba Region, Ala.			
South and North Alabama RR.	2,765	320	3,085
S. R. & D. R.R.	9,370	1,485	10,855
Chicago B. & Q. R.R	244 289	..	..
B. & M. R.; R.R.	64,754	..	..
	8,378,852		

The Anthracite Combination has ordered a reduction of 25 per cent., the same as last month, in the quantity of coal to be mined in the different regions, during the present month. We give in another place the prices of coal according to programme ; we understand for stove and chestnut coal these prices are well maintained, but for broken, and egg, there is no secret made of heavy shading from quotations ; 50 cents a ton off is quite common, and we have even heard from good authority of a case of a good standard Lehigh coal having been offered in Connecticut for $1 off of the official price. This shading becomes more and more pronounced as the season draws to a close. A general reduction is anticipated in December by the dealers, but no indication has yet been given by the Combination of any inaention to reduce prices, and the probability is that they will be kept nominally at November rates through December at least.

In bituminous coal we have to report a sale of 900 tons "Reserve" coal from Sydney, price not named, but less than $4 50, delivered at the wharf here. Also a cargo of Youghiogheny coal from the Waverly Co., at $7.50, delivered at New York. This coal is making a very good reputation as a gas coal in this market, in fact ; those who have used it consider it at least equal, if not superior, to the best Westmoreland. The shipments East will, we understand, be considerably increased next season. The Waverly Company have very unusual facilities for mining, in the size and lie of their coal vein ; in fact, they pay their men but 2 cents per bushel (76 lb.) for mining lump coal, (all going over a 1¼ inch screen), and 1 cent per bushel for nut, (what goes through a 1¼ inch and over a ¾ inch screen) the nut amounts from 20 to 22 per cent. of the lump.

From Nova Scotia we learn that the total sales for the first nine months of this year have been about 468,000 tons, or 173,000 tons less than in the corresponding period of last year. The falling off in the trade has been altogether from Cape Breton. There is little prospect of much more being done this season, and the workmen will probably have a very hard winter. Late immigrants have returned to France, seeing no hope of steady employment. We notice in an exchange a statement of a contract for 20 cargoes of Provincial coal for Cuba, having been made by New York parties at a very low figure. It will scarcely surprise those acquainted with the reliable (?) statements of the paper in question, that no such contract or sale has been made or even talked of. The Cuban markets are fully stocked, and it would be impossible to place 10,000 or 12,000 tons there at the present time on any terms.

The Cumberland trade is so quiet that a sale of two cargoes, (1000 tons), by one of the companies in the past week is worthy of notice.

Wholesale Prices of Anthracite Coal for Nov. f.o.b., at the Tide Water Shipping Ports per ton of 2240 lb.

	Lump.	Steamer.	Grate.	Egg.	Stove.	Chestnut.
Wyoming Coals.						
†Lackawanna and Scranton at Elizabethport & Hoboken	5 55	5 65	5 75	5 90	6 40	5 35
*Pittston at Newburgh	5 15	5 15	5 25	5 45	5 90	4 85
*Wilkesbarre at Port Johnston.	5 55	5 65	5 75	5 90	6 40	5 35
Plymouth, R. A.	....	....	5 75	5 90	6 50	5 35
Susque. Coal Co. at Amboy W.A.	5 55	5 65	5 75	5 90	6 50	5 35
Kingston at Hoboken	5 55	5 65	5 75	5 90	6 40	5 35
***Lehigh Coals.**						
Old Company at Port Johnston	6 50	....	6 45	6 45	6 60	5 65
Old Company's Room Run "	6 00	....	6 00	6 00	6 35	5 35
Sugar Loaf at "	6 00	....	6 45	6 45	6 60	5 65
Lehigh Coal Exchange "	6 35	....	6 30	6 30	6 45	5 50
Honey Brook at Elizabethport.	6 35	....	6 30	6 30	6 45	5 50
Spring Mt. C. Co. at Hoboken	6 35	....	6 30	6 30	6 45	5 50
Beaver Meadow at South Amboy	6 35	....	6 30	6 30	6 45	5 50
Schuylkill Coals at Port Richmond.						
Schuylkill white ash	5 05	5 15	5 25	5 40	5 90	4 45
Schuylkill red ash	...	....	5 40	5 50	5 95	4 55
Shamokin white and red ash	....	...	....	5 40	5 90	4 45
N. Franklin	....	....	5 85	5 85	5 90	4 45
Lorberry	....	....	6 20	6 20	6 20	4 80
Lykens Valley	....	....	....	6 85	6 85	5 40

* Small or Pea coal is quoted by these Companies at $1 35 per ton less than Chestnut.

† f.o. b. in New York Harbor.

	Per ton.
Freight from Hoboken and Weehawken to New York	40c.
" " Elizabethport & Fort Johnston to New York.	40c.
" " South Amboy to New York	45c.
" " Newburgh to New York	65c.
" " Port Richmond, "Phila." to N. Y. alongside	95c.
" " Rondout to New York by boat or barges of the D. & H. Canal Co. "delivered"	50c.

Cargo Prices of Bituminous Coal.

Per ton of 2240 lb.

Domestic Gas Coals.

	At the Shipping Ports.	Alongside in New York.
Westmoreland and Penn, at Greenwich, Philadelphia	$6 25	$7 65
" " at S. Amboy	7 00	....
Red Bank Cannel Pa., at Phil.	8 50	9 50
" " at S. Amboy	9 00	....
" Orrel, "	7 00	7 65
" " at Philadelphia	6 25	....
Youghiogheny, Waverly Co, at Baltimore	6 00	7 65
Despard, West Va., "	5 50	7 20
Murphy Run, W. Va. at Baltimore	5 50	7 20
Fairmount, W. Va "	5 50	7 20
Newburgh Orrel, Md. "	5 50	7 40
Cannelton Cannel, W. Va., at Richmond.	11 00	12 60
" Splint, " "	5 25	7 50
Peytona Cannel, " "	....	12 50
Sterling " Ohio	....	12 00
Straitsville, " At Sandusky, O.	3 65	11 50

Foreign Gas Coals.

	Sterling.	Am. cur'cy.
Newcastle, at Newcastle-on-Tyne	12/@13/6	7 00@ 8 00
Liverpool House Orrel, at Liverpool	29/	13 00
Ince Hall Cannel "	52/	18 00
" Gas Cannel "	40/	15 00
Scotch Gas Cannel, at Glasgow, nominal.	28/	9 50
	Gold.	
Block House, at Cow Bay, N.S.	2 25	6 50
Caledonia, at Port Caledonia	1 87½	5 70
Glace Bay, at Glace Bay	2 00	5 50
Lingan, at Lingan Bay	2 25	6 50
Sydney, International and Reserve mines, at Sydney	2 25	5 75
Pictou, Albion and Vale mines, at Pictou	2 50	6 50

Steam and House Coals.

Broad Top, at the mine, $1 25; at Port Richmond, Phil	4 75@5 00 — 6 00@6 25
Cumberland, at Georgetown and Alexandria, Va.	4 30@4 40 — 5 75@6 00
Cumberland at Baltimore*	4 60@4 75 — 6 25@6 50
Clearfield, "Derby," "Kitanning" and "Sterling," at the mines, $1 25; at Greenwich, Phil	4 75@5 00 — 6 25
James River, carbonite, at Richmond, Va	6 75 — 9 00
" bituminous, "	4 00 — 6 25
*Schooner freights from Baltimore to New York are	$1 25
Barge " " " " "	1 70

Retail Prices in New York.

Anthracite.

per 2000 lb. are as follows:

	Grate and Egg.	Stove.	Chestnut.
Pittston coal, in yard	$6 00	$6 20	$5 40
Lackawanna Coal delivered	7 60	7 85	7 10
Wilkes-Barre, delivered	7 60	7 85	7 10
Lehigh & Locust Mountain, del'd	7 50	8 00	7 50
Schuylkill Red Ash del'd	8 25		

The cost of delivering Pittston coal ranges from 40 cents to $1 per ton, according to distance from the yard.

Bituminous.

Per ton of 2000 lb.

Delivered.

Liverpool House Orrel	$23 00
Liverpool House Cannel	25 00
American Cannel	16 00
American Orrel	15 00
Straitsville Cannel	16 00
Carbonite	12 00
Cumberland	9 00

Coal Trade of Philadelphia.

PHILADELPHIA, Nov. 4, 1874.

Bituminous Coal, Wholesale.

Penn. and Westmoreland (Gas), f.o.b., Greenwich	6 25
Broad Top, (according to destination) f.o.b., Port Richmond	4 75@5 00
Clearfield f.o.b. at Greenwich, according to destination	4 75@5 00

Bituminous, Retail.

$6 60 in yard, per 2240 lb., cartage added.

Anthracite, Retail.

Egg, per 2240 lb., $6 20 ; Stove, $6 25 ; Chestnut, $5 10 ; delivery costs, 75 cents extra.

Baltimore, Md. Nov. 4, 1874.

Reported by our Special Correspondent.

WHOLESALE PRICES PER 2240 LB.

ANTHRACITE.

	afloat.	at depot.
Wilkes-Barre, "Lee," or "Diamond,"		
Lump, steamboat	$5 00	$5 40
Broken	5 25	5 50
Egg	5 62	5 90
Stove	5 82	6 10
Pittston and Plymouth.		
Lump, steamboat, and broken	....	5 45
Egg	....	5 80
Stove	....	6 00
Lykens Valley, red ash, all sizes	6 00	6 30

From wharf or yard. wholesale, 50@75c. additional. By retail, all kinds and sizes, per 2,240 lb, $7@8 00.

BITUMINOUS.

George's Creek and Cumberland f. o. b. at Locust Point for cargoes	4 60	4 75
West Va. Gas Coal f. o. b. at Locust Point	5 50	....
Kanawha Cannel, coarse	13 00	....
Tyrone	7 25	....
Ritchie Mineral of West Virginia	1 00	....

Boston. Nov. 4, 1874.

Reported by our special correspondent.

CARGO PRICES TO TRADE.

Lingan coal	$ 5 75	Westmoreland	7 75
Caledonia	$6 00@$6 25	Waverly Co. Youghiogh'y	7 75
Pictou	6 15	Cannelton Cannel	13 50
Block House	5 60	Cumberland	7 00@ 8 00
Red Bank Cannel	10 00	Anthracite	6 50@ 7 25
Glace Bay	5 40	" Retail	7 50@ 8 00
Sydney	7 25		

From the *Commercial* of Oct. 31.

Anthracite has been a little more active at retail, but the wholesale trade look for no immediate improvement. Some dealers will advance 50c., Monday. We quote $7 50@8 retail, and $6 50@7 25 nominally by the cargo. Freights have gone up a trifle this week, and are now $1 60@1 75 from Philadelphia. Vessels are now difficult to obtain at the excessively low rates that have been ruling, as they are obliged to make longer voyages at this season than in the summer. Now that the weather is getting cooler, many will soon be going South for cotton and lumber.

Bituminous is dull. There is little Nova Scotia on hand, and little expected. We quote Cannel, $22@26; Caledonia, $6@6 25; Cumberland, $7@8.

Buffalo, N. Y. Nov. 4, 1874.

Reported by our Special Correspondent.

Per ton of 2000 lb.

	Slack.	Nut & Slack.	Nut.	Lump
Connelsville coke				6 50
Sterling cannel				6 00
Red Bank				5 75
Youghiogheny coal for gas				5 50
Briar Hill coal		3 25		5 00
Fairmount "		3 25	3 50	4 25
Catfish "		3 25	3 75	4 25
Stoneboro "	2 75		3 50	

Briar Hill coal, and Stirling and Red Bank cannels, at $8 ; all other coals $1 per ton above wholesale prices.

Anthracite f. o. b. vessel. Retail prices delivered and screened, $1 per ton additional.

Grate	6 70	Stove	7 00
Egg	6 70	Chestnut	5 60

Chicago, Ill. Nov. 2, 1874.

Specially reported by Messrs. RENO & LITTLE, Coal Merchants.

No change in prices of coal.

Retail prices per ton of 2000 lb. delivered to buyer.

		BITUMINOUS.	
Lehigh Lump	$10 75	Briar Hill and Erie	7 50@ ....
Lehigh prepared and car load lots	9 75	Walnut Hill (W. Va.)	6 50@ ....
Lackawanna, Wilkes-Barre and Pittston,*		Midway (West Va.)	6 50@ ....
Grate, egg, and chestnut.	9 00	Cannel	8 00@ 9 00
Stove or range	9 50	Blossburg	8 00
		Indiana Block	6 00
		Hocking "Brooks"	6 00
		Wilmington and Illinois	5 00

*75 cents off these prices for car load lots to country dealers and manufacturers.

Cleveland, O. Nov. 4, 1874.

Please continue report same as last week, as there is no change in prices and business is exceedingly dull.

Reported by our Special Correspondent.

Per ton of 2000 lb.

Youghiogheny, l'p, f.o.b.	$4 65	Straitsville, f.o.b.	$3 40
Y ughiogheny, nut	3 60	Columbiana "	3 40
Briar Hill, (Church Hill).	4 25	Strip Vein "	3 65
" " (Brookfield).	4 10	Mountain Blossburg	
Massilon, according to quality	$3 40 to 3 65	(blacksmith)., f.o.b.	5 75
Hocking Valley, f.o.b.	3 50	Darlington and Sterling Cannel, f.o.b.	4 50
Anthracite, Lackawanna on cars, Egg			$6 85
" " " "		Stove	7 30
" " " "		Chestnut	6 90
Youghiogheny Coke,		here	5 50
Connellsville "		"	5 75

Cincinnati, O. Nov. 3, 1874.

Specially reported by Messrs. A. BUCHANAN & Co., wholesale and retail dealers in coal and coke.

Please continue our report same as previous one, as there has been no change in the market.

Per ton of 2000 lb.

	Bush.	Ton.
Youghiogheny, or Pittsburgh, afloat	13 c.	$2 86
Pomeroy coal	8 c.	
Cannel coal	18c.	4 68
Semi Cannel	11 c.	2 60

The following are retail prices delivered:

Youghiogheny	18 c. $3 90@$
Pomeroy	14 c.
Cannel	24 c. —
Kanawha Semi Cannel	15c. —
Anthracite	$9 50@11 00
Foundry coke	12c. —
Soft coke	10c. —

Detroit, Mich. Nov. 4, 1874.

Specially reported by Messrs. ROBINSON & KEYS, dealers in all kinds of coal.

Per ton of 2000 lb.

Lehigh Lump, per ton.	$10 50	Blossburg	8 50
Lehigh " prep.sizes.	9 50	Briar Hill	7 50
Wilkes-Barre, Grate and Egg	8 50	Willow Bank	7 00
		Erie	7 50
Wilkes-Barre, Stove and Nut	9 00	Massilon	7 00

Erie, Pa. NOA. 4, 1874.

Reported by our Special Correspondent.

Wholesale, per ton of 2,000 lb.

Bituminous f.o.b.

Briar Hill lump	$4 00	Beaver lump	$4 00

Indianapolis, Ind. Nov. 3, 1874.

Specially reported by Messrs. H. MCCOY & Co.

Per ton of 2000 lb.

BITUMINOUS.

Best Block coal	$2 90	Indiana cannel	6 50
Best Highland	2 40	Hocking Valley	3 00
Block Nut	1 65	Youghiogheny	5 42
Highland "	1 65	Blossburg (smithing)	7 30
Block slack, per car load	15 00	Piedmont "	7 75
Peytona, cannel per ton	8 50	Gas coke, per bushel	9½c

ANTHRACITE (Lackawanna).

Grate	$8 70	Chestnut	8 60
Egg	8 70	Stove	8 85

Retail, per bushel of 70 lb.

Block	14c.	Peytonia Cannel	32c.
Highland	12	Indiana "	28
Highland Nut	9	Youghiogheny	25
Block "	9	Blossburg	27
Slack	7	Piedmont	30

ANTHRACITE.

	per ton.		per ton.
Grate	$10 50	Stove	$10 50
Egg	10 50	Chestnut	10 50

Louisville, Ky. Nov. 3, 1874.

Specially reported by Messrs. BYRNE & SPEED.

Most of the Pittsburgh coal is now in the hands of retail dealers, bought at 11 and 12 cents per bushel; the supply is light, but with the demand we have had for the past two weeks, will most probably hold out well u til we have water. Kentucky coal is worth 12 to 13 cents on the cars. The following are our retail prices:

Pittsburgh, per load of 1900 lb	$4 00
Pomeroy	
Buckeye Cannel	5 50
Peytona Cannel	6 00
Nut and slack	2 75
Kentucky lump, per load	
" nut, "	
" Slack "	
City-made Coke, per bushel	10c
Kentucky on cars at wholesale, per bush.	13c
Anthracite, per ton	$10 to $10 50

Milwaukee, Wis. Nov. 2, 1874.

Specially reported by Messrs. R. P. ELMORE & Co.

There is no change in the price of coal or demand. Still, an amount of timidity seems to prevail that will, we feel, retard sales. Country orders seem to come slow just now.

Retail prices per ton of 2000 lb.

Lehigh Lump	$10 00	Briar Hill, select	$8 50
Lehigh Prepared	10 50	Blossburgh	8 00
Lackawanna	9 50	Pittsburgh	7 50

New Orleans, La. Oct. 31, 1874.

There has been a little animation in the wholesale coal market, and prices have advanced in consequence. We quote:

Pittsburgh coal, retail, per bbl	75c
" wholesale	47½@50c.
" to steamboats, per box	60c.
" to manufacturers, per bbl	65c.
" shipments per hhd	$7 00
Anthracite, retail, per ton	$12 50
" wholesale per ton	$9 00
Spadra (Arkansas) coal, retail. per bbl	75c.
Mt. Carbon, wholesale, per bbl	45c.
" " retail per bbl	65c.
Virginia Cannel, per bbl	90c.
Scotch Cannel, per bbl	1 00

Pittsburgh, Pa. Nov. 2, 1874.

Reported by our Special Correspondent.

Per ton of 2000 lb. and Bushel of 76 lb.

	per ton.		per ton
Youghiogheny coal	$2 00	Pittsburgh retail delivered per bushel	9c@10c
" coke	2 50		
Connellsville coal	2 10	Anth'cite on cars Lehigh	$7 75
" coke	2 75	" " Wilkes-Barre	6 75
Pittsburgh coal	1 85		

Twenty-five to fifty cents per ton additional for delivery.

Eastern.				
Anthracite	10,980	7,665	....	3,315
Cumberland	6,350	8,971	2,621	....
Domestic.				
Mt. Diablo	127,150	151,166	24,016	....
Coos Bay	28,941	36,785	7,844	....
Bellingham Bay	17,460	11,385	....	6,075
Seattle	13,572	4,235	....	9,337
Rocky Mountain	1,795	323	....	1,472
Totals	318,641	348,340	78,542	48,643

San Francisco.

From the *Commercial Herald*, October 22.

Imports from January 1st to October 16th:

Anthracite	8,847	Vancouver Island, tons	40,185
Australian, tons	84,042	Bellingham Bay, tons	11,385
Coos Bay, tons	38,533	Rocky Mountain, tons	323
Cumberland, tons	12,649	Seattle, tons	4,235
English, tons	14,462	Mt. Diablo (9 mos.)	151,166

Imports during the week include 1,693 tons to P. M. S. S. Co. per *Lady Cairns* from Newcastle, N. S. W.; the *Star of Bengal* from Melbourne, 936 tons; *New Era* from former, 1,335 tons; *Johan Jurgens* from ditto with 1,072 tons Coal and 82 tons Coke; *Don Enrique* from same with 1,785 tons, *Centurion*, 1,100 tons; *Culzean*, 2,100 tons; *Richard Robinson* from New York, 700 tons; ship *Charger*, 104 tons from same. These, with Mt. Diablo and the Northern Coast supplies continue to keep us well stocked, and prevent any improvement in price. Australian spot cargoes may be quoted at $10@10 25; Wellington at $11@11 50; Coos Bay, $10; Bellingham Bay, $8 50. The Cal. Mt. Diablo mines, Black Diamond and others, continue to produce largely of Steam Coals, finding ready sale at $6 25@8 25 per ton for coarse and fine—the latter screenings being preferred by all local factories to the lump.

St. Louis, Mo. Nov. 2, 1874.

Specially Reported by the COLLINSVILLE COAL AND MINING COMPANY.

ANTHRACITE.

Per ton of 2000 lb.

	City delivery.
Lehigh Lump	$13 50
Lackawanna and Wilkesbarre	12 50
Semi Anthracite	9 50

BITUMINOUS.

Per ton of 2000 lb.

	E. St. Louis.	City delivery
Washington Indiana—smithing	$4 00	$4 87
O'Fallon, Ills	2 00	3 00
Collinsville and Belleville, Ills,	1 75	2 75
Indiana Cannel	6 00	7 00
Missouri Cannel	....	5 00

Retail, 25c. per ton additional.

Montreal. Nov. 2, 1874.

Reported by our Special Correspondent.

Per ton of 2,240 lb.

Scotch Steam	$4 50@4 75	Cape Breton Steam	$4 00
Pictou "	4 25	Newcastle Smiths,	5 50
Anthracite at retail, 2,000 lb., delivered, less 5 per cent.			
Egg	$8 00	Nut	$8 00
Stove	8 50	Chestnut	7 75

Toledo, Ohio. Nov. 2, 1874.

Per ton of 2000 lb.

Specially reported by Messrs. GOSLINE & BARBOUR.

Retail.		Retail.
Wilkes-Barre and Scranton, Large and Small Egg,	$8 00	BITUMINOUS.
Stove	8 25	Blossb'g and Cumberl'd, $8 00
Chestnut	8 00	Massillon Lump	6 00
Lehigh Lump	10 00	Briar Hill	7 00
		Straitsville	3 75
		Hocking Valley	4 00

Halifax, N. S. Nov. 2, 1874.

Reported by our Special Correspondent.

No change since our last.

Prices per ton of 2240 lb. in gold.

Sydney (old mines)	$4 75	Little Glace Bay	3 75
Gowrie	3 75	Blockhouse	4 00
Victoria	3 75	Albion (at Railroad)	4 25

Toronto, Ont. Nov. 2, 1874.

Reported by our Special Correspondent.

ANTHRACITE.

	per ton.		per ton.
Broken	$7 65	Chestnut	$7 65
Egg	7 65	Lehigh	9 00
Stove	8 15		

BITUMINOUS.

Blossburgh	7 50	Screenings	5 00
Briar Hill	7 00	Soft Nut	5 50

Rates of Transportation on Anthracite Coal to Tide Points.

**From Mauch Chunk to New York* "towing limits," via Morris Canal $2 71

**From Mauch Chunk to Jersey City* "for reshipment," via Lehigh Valley R. R. 2 51

‖*From Phillipsburg to Hoboken* "for shipment," via Delaware, Lackawanna & Western R. R. 1 38

† *From Penn Haven to Elizabethport, Port Johnston and Hoboken*, via Central railroad of New Jersey 2 47

‡ *From Mauch Chunk to Elizabethport, Port Johnston, Hoboken and South Amboy*, via Lehigh Valley R. R. 2 31

From Port Delaware to New York and Jersey City, via Morris Canal 1 74

From Mauch Chunk to Philadelphia via N. P. R. R 1 75

From Schuylkill Haven to Philadelphia, via canal. Freight 65c., tolls $1 10 1 75

From Tamaqua to Port Richmond "for shipment," via P. & R. R. R. 2 07

From Schuylkill Haven to New York, via canal 2 72

From Upper Lehigh to Jersey City, via Central R. R. of N. J. 3 24

From Tamaqua to Philadelphia, via Phil. & Read. R. R. main line 2 17

On canal coal at Jersey City an additional charge of 20 cents per ton will be made for transferring coal from boat to boat, and thirty cents per ton for placing the same on the wharves and re-shipping.

The rate on coal for way-points on the New Jersey railroads will be $1 15 per ton from Mauch Chunk to Phillipsburg.

‖ 42 cents additional to this rate is added on coal shipped for consumption.

† The rate from Phillipsburg to these points is $1 09 per ton less. This rate does not include wharfage or shipping expenses at tide ports.

‡ From Penn Haven to these points it is 16 cents additional, and from Phillipsburg the rate is 93 cents less.

* At a recent meeting of the N. Y. and Lehigh Coal Exchange, it was decided to make the price of coal at this point for *way trade* the same, whether shipped via canal or railroad.

Freights on Bituminous Coals from the Mines to Tide-Water Shipping Ports.

From the Mines to Cumberland and State Line (say an average of 20 miles) the charge is 3 cents per ton of 2240 lb. per mile.

From State Line to Amboy, (346 miles) $4 00 per ton of 2000 lb. On coal shipped beyond that point there is a drawback of 50 cents per net ton.

From Cumberland to Baltimore, (178 miles) $2 58 per ton of 2240 lb., or $2 30 per net ton, and 4 cents per gross ton for use of cars.

From Cumberland to Georgetown, (152 miles) by canal, $1 76 per ton of 2240 lb. *To Alexandria, Va.*, 11 cents per ton more.

From the Mines to Piedmont, (from 4 to 10 miles) 5 cents per ton of 2240 lb. per mile on distances less than 5 miles, and 4 cents per ton per mile on distances not over 10 miles.

From Piedmont to Baltimore, (206 miles) $2 97 per ton of 2240 lb., or $2 65 per net ton.

From any point in the Kanawha Valley to the James River wharves below Richmond (say 350 miles) by C. and O. R. R., including terminal charges, per ton of 2000 lb., for Cannel coal, $5 35. Subject to rebate on large quantities.

Do., do., for Semi Cannel or Splint, $3 65.

From Hawks Nest to Richmond (say 300 miles) the freight on Bituminous or Splint is $3 25 per ton of 2000 lb; on Cannelite it is $5 00.

From Irwin to W. Phila. (say 332 miles) per P. R. R. Penn. Westmoreland gas coal, per ton of 2000 lb		$5 00
From Osceola to W. Phila. (say 248 miles) per T. & C. R.R. per ton bituminous coal of 2000 lb		3 55
From Fairmount and Clarksburg to Baltimore (say 300 miles) via B. & O. R. R. including loading, per 2000 lb		5 20
On through coal after deducting drawback		4 15
From Richmond, Va., to New York, 392 miles per 2000 lb.		2 10
" " " Boston about 650 " "		3 00
" " " Philadelphia 292 miles "		1 75
From the Mines to Richmond via James River and Kanawha Canal, 15 miles		52
Pictou to North Side Cuba	at $3 30 gold	
Cape Breton to Barbadoes	3 50 "	
" " " with privilege of a second port	3 75 "	
" " Porto Rico	4 00 "	
" " North Side Cuba	3 00 "	

From the Provinces to South America.—We have closed 450 tons, Pictou to Bahia, at $5 75, and can use another medium vessel at about the same rate.

Freights.

We continue to note a firm feeling in the rates of freight from Philadelphia to Eastern ports. We accordingly quote: To Boston, $1 60, and to Providence, $1 35, with an upward tendency. Baltimore and Georgetown rates continue as noted in our last, viz.: to New York, $1 35@1 40, and to Boston the rate varies from $1 65 to $2. No change has transpired in our stereotyped quotations from New York to points East, and we quote nominally, $1 30 to Boston, and 85c. to Providence, Fall River and Newport.

Lehigh and Delaware Division Canals.

Until further notice the rates of toll on the above canals will be as follows:

From Mauch Chunk to Easton, 55c. per ton. From Mauch Chunk to New Hope or Bristol, 90c. per ton.

Towing from Bristol to Philadelphia, 7c. per ton.

On local shipments the toll sheets of 1873, will be adopted until further notice.

Delaware and Raritan Canal.

TOLLS AND STEAM TOWAGE—ON CARGOES EXCEEDING 110 TONS.

Anthracite,	Fairmount to New York	74
"	Philadelphia to New York	68
"	Lambertville to New York	62
"	Trenton to New York	37
Bituminous,	Greenwich to New York	66⅔
Cumberland,	Philadelphia to New York	65½

CANAL TOLLS EXCLUSIVE OF TOWAGE.

Bordentown to New Brunswick.

Anthracite coal	40 cents.
Bituminous and semi-bituminous coal	37½ "

Towing.

Per ton of 2240 lb.

FROM NEW YORK TO POINTS ON THE HUDSON RIVER.

	per ton.		per ton.
Manhattanville	8 c.	Haverstraw	17 c.
Spuyten Duyvel	9 "	Verplanck's Point	17 "
Yonkers	10 "	Peekskill & Newburg	18 "
Hastings	11 "	West Point & Cold Sp'g	20 "
Piermont & Dobbs Ferry	13 "	Poughkeepsie	22 "
Nyack & Tarrytown	15 "	Rondout	23 "
Sing Sing	16 "	Hudson	25 "
Croton Landing	17 "		

Boats of 100 tons and under—per boat.

Manhattanville	$11 00	Spuyten Duyvel	$13 00
Yonkers	15 00	Tarrytown	18 00
Sing Sing	20 00	Peekskill	20 00
Newburgh	25 00	Poughkeepsie	30 00

ON LONG ISLAND SOUND.

	per ton.		per boat.
Norwalk & Bridgeport	33⅓ c.	Port Morris	$20 00
New Haven	33⅓ "	West Farms, mouth of Creek	25 00
Derby ($50 per b't extra)	33⅓ "	West Farms	35 00
Southport & Westport	40 "	West Chester	30 00
Milford	40 "	College Point	25 00
Branford	45 "	Flushing & White Stone	30 00
New London	60 "	East Chester Town Dock	60 00
Middletown	65 "	New Rochelle & Glen Cove	50 00
Norwich	68 "	Mamaroneck & Port Chester	70 00
Hartford & Stonington	75 "	Greenwich, Stamford & Darien	75 00
Mystic	75 "		
	per boat		
Harlem	$18 00		
Mott Haven	18 00		

Harbor Towing.

From Hoboken to

	Loaded.	Light.
53d st., towing limits per boat	$6 00	$5 00—$11 00
Gowanus " "	8 00	6 00— 14 00
Newtown Creek " "	10 00	9 00— 19 00
Port Johnston " "	9 00	9 00— 16 00
130th street, North River "		—18 00
From East River to Weehawken and return to East River	9 00	7 00— 16 00

To 61st st., $12 extra; to 79th st., $14 extra; to 93d st., $16 extra.

REVIEW OF THE BRITISH COAL AND IRON TRADES.

Compiled from our exchanges bearing date to October 24th, 1874.

England—There is a very fair demand for both coal and iron, and prices are in most cases firm, with an upward tendency in coal in districts disturbed with strikes or prospects of such. In the North of England, concessions of from 1/ 6d. to 3/ are made on contracts for pig iron, to be delivered two and three months hence. In this and other districts where labor troubles are anticipated, contracts for the delivery of coal contain strike clauses. In West Yorkshire the miners, by a large majority, have voted against arbitration. At Sheffield there is a fair business doing in the manufacture of steel. The miners in West Lancashire are standing out firmly, and it is thought nothing but starvation will bring them to an acceptance of the masters' terms. Business in this district is at a stand still.

The following are the quotations: No. 1 pig iron in the North of England, 70/; No. 3, 60/; No. 4, forge, 58/; rails, ordinary sections, £7 15/@8; merchant bars, £9@11. In South Staffordshire: marked bars, £10 10/@11; cinder pig, £3 5/@3 7/ 6d.; all-mine, £5@5 10/. Coal is quoted as follows: In the North of England, 14/ for best house coals, and 16/ for best steam; at the pits, in South Staffordshire, best house coals are held at 12/ 6d.; in London, house coals are 22/ 6d.@26/ 6d.

Wales.—The shipments of iron from the ports of South Wales have been rather limited. There are indications of a more lively business springing up, but the masters have concluded that a further reduction of prices is necessary to give life to trade, and notices have been posted at most of the prominent works. The workmen at the London Steel Works have submitted to a reduction of 10 per cent. The coal trade is in a very good condition, with a large demand for exportation, and prices are generally firm.

Scotland.—There are now nearly as many furnaces blowing as there were at this time last year. The principal makers' brands of pig iron are declining. During the past week the prices of warrants declined from 83/ 6d. to 81/ 6d. The amount of pig iron in CONNAL'S Glasgow stores on the 19th of October was 17,172 tons, being from 300 to 400 tons less than in the week previous. The approach of winter has brought about a slightly better demand for household coals, and prices remain firm.

Some of the miners, acting under the advice of Mr. MACDONALD, M. P., are asking the employers for an advance of wages; but the reply is, that they "may rather look for a decline." The average wages of miners throughout Scotland at this time is 5/ per day.

The following are the quotations of the principal makers' brands of pig iron:—Gartsherrie, 102/ 6d.; Coltness, 107/ 6d.; Summerlee, 100/; Langloan, 107/ 6d.; Govan, 89/; Calder, 107/ 6d.; Shotts, 107/ 6d.; Carnbroe, 94/; Monkland, 90/; Clyde, 88/ 6d.; Eglinton, 86/; Dalmellington, 89/; Glengarnock, 96/; Carron, 105/: Kinneil, 92/ 6d.

IRON MARKET REVIEW.

Import Duties.

The following are the duties in Gold on Iron:

Flat Iron, not less than 1, nor more than 6 inches wide, nor less than ⅛", nor more than 2 inches thick. *Round Iron*, not less than ¾, nor more than 2 inches in diameter, and *Square Iron*, not less than ½, nor more than 2 inches square ₱ lb. 9-10 of 1c. *Flat Round or Square Iron*, of larger or smaller sizes than the above mentioned, per lb 1 35-1000

Provided, that all iron in slabs, blooms, loops, or other forms, less finished than bars, and more advanced than pig iron, except castings, shall pay the same as iron in bars.

Provided, that none of the above iron shall pay less than 31½ per cent.

Railroad Iron	63c. per 100 lb.
Boiler plates, or other plate iron not less than 3-16 of an inch thick, per lb	1 35-100 c.
Scrap castings per ton	$5 40
" *wrought* " "	7 00
Pig iron per ton	6 30

Iron ore 10 per cent. *ad valorem.*

New York.

Nov. 5, 1874.

We might save much time and trouble, and be practically quite accurate in our reports, were we to stereotype one of our reports and keep it standing month after month. There is no life in the market, next to nothing doing, and prices drooping constantly.

We have been quoting No. 1 Anthracite Pig at $27@29 till last week, when we made it $28; this week we quote $27@28, that being the highest figure asked. No. 2, $26. Forge, $24@$26. We even hear of a lot called No. 1, but we believe a silver gray, sold at $26.

We note the sale of 500 tons forge at private terms.

Scotch Pig.—We note sales of 200 tons Eglinton at $37@38. We continue to quote as last week: Eglinton, $37@$38; Glengarnock, $40; Coltness, $41; Cable reports quote Gartsherrie and Coltness, 105/; Glengarnock, 96/; Eglinton, 88/.

Rails.—There has been rather more inquiry during the week, but there are no transactions of importance to record; $48 gold has been refused for a small lot of Foreign. We may quote $48@49 gold, and $51@54 currency for American at the works. We have heard of a sale of 56 lb. rails at $51 at a Pennsylvania Works, and of sales of 25 lb. rails at another Pennsylvania mill at $52 and $53; steel rails may be quoted at $80.

Old Rails.—There have been no transactions here, but we see quoted a sale of 3,000 tons old T's, Western delivery, part at $27.

Scrap.—We note sale of 100 tons old car wheels on private terms.

We copy the following from Messrs. BIGELOW & JOHNSTON'S price current, dated October 31st:

NEW RAILS.

IRON.—Imports: Total to date, none; same time, 1873, 41,449 tons.

STEEL.—Import at New York this month, 3,427 tons; total to date, 68,485 tons; same time, 1873, 80,574 tons.

Foreign remain as last quoted, there being little or no demand. In American, some thousands of tons have been placed on terms not made public, but all more or less on long credit. Steel rails have been very quiet, but there are some transactions pending.

OLD RAILS.

Import at New York this month, none; total to date, 2,235 tons; same time, 1873, 9,948 tons.

Old rails have moved more freely but at a decided reduction in rates. As low as $27 has been accepted for Western delivery. The quotation for D. H., in our last, should have been £4 17/ 6d. f. o. b. London, instead of £4 7/ 6d. This is still the price there. Our stock of foreign is now about exhausted.

SCRAP IRON.

No change of moment, except that prices are a little weaker.

PIG IRON.

Import of Foreign this month, 1,550 tons; previously since January 1st, 24,303 tons; total to date, 25,853 tons; same time, 1873, 56,461 tons.

American continues to droop, and to effect sales to any extent, a considerable concession would still be necessary. Scotch keeps firm, but being mostly in one hand, attracts now very little general attention. Prices being $10 per ton above best American, it may now well be called a fancy article.

Boston.

From the *Commercial* of Oct. 31.

Pig continues to sell in a small way at very uneven and unsatisfactory prices. The report is credited that a lot of 65 tons No. 1 Minersville, that could not have cost less than $33 75 to land here, had been closed out at $30. A statement from Ansonia, Conn., indicates that New York parties have billed other brands of No. 1 to that city at equally low prices. The demand is wholly of a retailing character.

Bar is somewhat unsettled, and we hear of sales at $65 and $63 a ton, as very ordinary occurrences. To the most of the trade it is an enigma how these prices can be quoted and business result without serious consequences.

Steel is moving in a trifle better way. We notice this week several of the tool manufacturers who were prominent in the free steel enterprise canvassing and buying rather freely of the best American, and have one large concern to acknowledge a conversion. We quote machinery, 9½c.@10c., and choice tool, 17c @17c¾.

Sheet iron is quite active on small orders, the present being the stove and sheet iron workers' harvest. The demand runs chiefly to refined, which is jobbing at 5¾c @7c. We quote Russia, 15¼c., gold; Common iron, 4¼c.@5c.; Galvanized, 9¼c.@14c.

Chicago

Nov. 3, 1874.

Specially reported by Messrs. ROGERS & Co., dealers in Scotch and American pig iron.

Quotations are as follows:

No. 1 Coltness	$46 00@ ....
No 1 Gartsherrie	45 00@ ....
No 1 Summerlee	44 00@ ....
No. 1 Glengarnock	42 00@ ....
No. 1 Eglinton	40 00@ ....
Warner's "American Scotch"	41 00@ ....
Massilon No. 1 Foundry	40 00@ ....
No. 1 Grand Tower Mo. ores (Bituminous)	33 00@ ....
No. 2, " " "	30 00@ ....
No. 1 Mill	28 00@ ....
Union "A" 1 (Anthracite)	32 00@ ....
Union "B" 1 (Anthracite)	30 00@ ....
No, 1 Lake Superior (charcoal)	34 00@ ....
No. 2 Lake Superior "	32 00@ ....
No. 3 Lake Superior "	36 00@ ....
No. 4 Lake Superior "	42 00@ ....
Bessemer Steel Rails	85 00@90 00
New Iron Rails	55 00@ ...
Old Rails	28 00@30 00

Cleveland.

Nov. 4, 1874.

Specially reported by Messrs. C. E. BINGHAM & Co., dealers in pig iron and iron ore

Quotations remain as follows:

No. 1, Anthracite Foundry	$.... @....
No. "	.... @....
No. 1, Bituminous "	31 00@....
No. 2, " "	29 50@....
No. 1, " Gray Forge	27 00@....
No. 1, Massilon Black Band	.... @....
No. B-1 " "	.... @....
No. 2 " "	.... @....
No. 1, Lake Superior Charcoal	33 00@....
No. 2, " "	32 00@....
No. 3, " "	34 00@....
No. 4, " "	35 00@....
Nos. 5 and 6 "	36 00@....
American Scotch, No. 1, Cherry Valley	34 00@....
" " No. 2	31 00@....

Cincinnati.

Nov. 3, 1874.

Specially reported by Messrs. TRABER & AUBERY, commission merchants for the sale of pig iron, blooms, ore, etc.

We have no improvement to report in our pig iron market. As the season advances there seems to be more anxiety on the part of holders to realize, and the point has evidently not been reached as yet to induce a speculative demand.

CHARCOAL.

Hanging Rock, No. 1, Foundry	$30 00@32 00—4 mos
" No. 2, "	28 00@29 00—4 mos
" Mill	27 00@ ....—4 mos
Tennessee No 1, Foundry	29 00@30 00—4 mos
Tennessee. No. 2 "	27 00@28 00—4 mos
" Mill	26 00@ ....—4 mos
Missouri, No. 1, Foundry	32 00@33 00—4 mos

STONE COAL.

Ohio No. 1, Foundry	29 00@30 00—4 mos
" No. 2, "	27 00@28 00—4 mos
Ohio Mill	26 00@ ....—4 mos
Missouri, No. 1, Foundry	30 00@31 00—4 mos
" No. 2, "	28 00@29 00—4 mos
" Mill	26 00@27 00—4 mos

CAR-WHEEL.

Hanging Rock, C. B.	50 00@53 00—4 mos
Tennessee "	45 00@48 00—4 mos
Missouri "	45 00@48 00—4 mos
Alabama "	45 00@48 00—4 mos

BLOOMS.

Charcoal	80 00@ 90 00—cash

SCRAP IRON.

Cast	75@ 1 00—cash
Wrought	1 25@ 1 50—cash

Indianapolis, Ind.

Nov. 2, 1874.

Specially reported by NELSON KINGMAN, broker and dealer in pig iron, etc.

Continue quotations.

New Rails at mill		$62 00@64 00	
Old Rails "		30 00@31 00	
Hanging Rock Charcoal Pig No. 1 foundry		35 00@36 00	—4 mos
" " " " 2 "		32 00@33 00	—4 mos
" " " Mill		29 00@31 00	—4 mos
STONE COAL.			
Indiana No. 1 Foundry pig Planet furn'e.		32 00@34 00	—4 mos
" 2 " " "		31 00@32 00	—4 mos
" 1 Forge " "		29 00@	—4 mos
" 2 " " "		27 00@	—4 mos
Ohio No. 1 Foundry pig		33 00@34 00	—4 mos
" 2 "		31 00@32 00	—4 mos
" 1 mill		28 00@30 00	—4 mos
Merchant Bar, card rates		60 00@62 00	—3 mos
1st quality C. H. No. 1 Boiler Plates, per lb		5¾@6 c	—3 mos
1st " Com. Sheet, for No. 24, W.G. "		5 c.	—3 mos
1st " Charcoal Sheet " " "		6 c.	—3 mos
Best Bloom Galvanized Sheet, discount 20 per cent			—ca-h.
2d quality " " "	30 "		—cash.

f. o. b in Indianapolis.

Louisville. Nov. 3, 1874.

Specially reported by GEORGE H. HULL, Esq.

There is some falling off in the demand, and prices are lower. The usual time, 4 months, is allowed on the quotations below.

HOT BLAST—CHARCOAL.

No. 1 foundry, from Hanging Rock ores		$30 00@33 00	
No. 2 " " "		27 00@28 00	
No. 1, forge, " "		25 00@26 00	
No. 1, foundry, " Tennessee "		28 00@30 00	
No. 2 " " "		26 00@27 00	
No. 1, forge, " "		25 00@26 00	
No. 1, foundry, " Alabama "		28 00@30 00	
No. 1 " " Iron Mountain "		30 00@33 00	

HOT BLAST—STONECOAL.

No. 1, foundry, from Missouri ores		30 00@32 00	
No. 2, " " "		28 00@30 00	
No. 1, forge " "		27 00@28 00	

COLD BLAST—CHARCOAL.

Car Wheel from Hanging Rock ores		45 00@50 00	
" " Tennessee "		43 00@45 00	
" " Alabama "		44 00@46 00	
" " Georgia "		44 00@46 00	
" " Missouri "		43 00@45 00	
" " Kentucky "		43 00@46 00	

Milwaukee, Wis. Nov. 2, 1874.

Specially reported by Messrs. R. P. ELMORE & Co.

Per ton of 2,240 lb.

Scotch ranges		$40 00 to	$45 00
No. 1, Lake Superior Charcoal		36 00 to	8 00
" 2, " " "		34 00 to	36 00
" 1, " " Anthracite		35 00 to	36 00
" 2, " " "		33 00	

Pittsburgh, Pa.

November 3, 1874.

Specially reported by A. H. CHILDS, Esq., commission merchant for the sale of pig iron, blooms, ore, &c.:

The metal market continues extremely dull, and prices have declined fully 50 cents per ton. Quotations are:

No. 1 Foundry, anthracite or bituminous		$27 50@28 00	—4 mos
No. 2 " "		26 00@27 00	—4 mos
Gray Forge "		25 00@25 50	—4 mos
White and mottled "		22 00@23 00	—4 mos
Hot blast charcoal		30 00@35 00	—4 mos
Cold " "		40 00@50 00	—4 mos

The Pittsburgh *Commercial* of October 31 reports as follows:

The tendency of the market for raw iron has been downward for several weeks, and the price has at last touched $25, four months, for standard gray forge iron. This was brought about during the week by a pressure to sell made by several parties from abroad, who were anxious to realize promptly.

The effect of the reduction has tended to check rather than stimulate the demand, and the consequence is a rather slim report.

We are reported the following sales:

BITUMINOUS COAL SMELTED FROM L. S. ORE.

200 tons gray forge	$25 50	—5 mos
200 " gray forge	25 00	—4 mos
150 " open gray forge	25 75	—4 mos
100 " gray forge	25 50	—4 mos
100 " gray forge	24 50	— cash.
50 " mottled forge, medium	23 00	—4 mos
50 " clear gray forge	25 50	—4 mos
40 " No. 2 foundry	26 00	—4 mos
40 " No. 1 foundry	27 00	—4 mos
20 " No. 2 foundry	26 50	—4 mos
10 " No. 1 foundry	27 00	—4 mos
10 " No. 2 foundry	29 00	—4 mos

CONNELLSVILLE COKE.

100 tons grey forge	$25 50	—4 mos
100 " grey forge	25 50	—4 mos
30 " No. 1 foundry	27 50	—4 mos

CHARCOAL.

30 tons No 1 foundry	$35 50@37 00	— cash.
50 " No. 1 foundry	35 00	—4 mos

San Francisco.

From the *Commercial Herald* of Oct. 22.

We continue to receive liberal supplies of American brands of Cast Steel from the East by rail, thus displacing old and well-known brands of English to a very great extent. There are but few sales of spot Pig Iron to note, although sales of Scotch to arrive months hence have been made at or about $40. We quote Scotch $42 50@47 50, according to brand and quality.

METALS.

NEW YORK, Nov. 6, 1874.

Gold Coin.—During the week past, gold has ranged from 110¾ to 110⅞, and closed yesterday at 110¾.

Bullion.—Fine silver bar is quoted at $1 26⅛@$1 27⅛, gold, per ounce, and fine gold bar at par ($20 67, gold, per ounce.)

Copper.—The copper market continues very firm, and advancing sales have been made during the week at 22¾@22½ and 23 cents for futures. The European market is also strong, owing to the heavy demand for government use on the Continent. Chili telegrams quote Best Selected at £93 in London, Chili Bars, £86.

By our mail advices Messrs. VIVIAN, YOUNGER and BOND report: "At the Swansea Ticketing on Tuesday last, 1747 tons British and Foreign ores sold at an average of 15/ 10d. per unit, for an average produce of 14⅝ per cent., Cape ores of 28 per cent. realizing 16/ 3d. per unit.

"Chili Bars have been neglected and prices are 20/ to 30/ easier, with sales down to £81 5/ for good ordinary brands, and £83 10/ to £82 10/ for picked.

"In Fine Foreign very little passing, some sales of Wallaroo at £91 2/ 6d.@£91 10/ for Cake and Ingot. Burra rather scarce at £90@£90 10/.

"English Manufactured only in very moderate demand at £95 for sheets. Yellow Metal at 8d.@8¼d. Tough and Best Selected £88@£89 and £90@£90 10/ respectively."

Tin.—This metal forms an exception to the list, and is weaker. It has all along been heavy. We may quote L. & F. 21 cents, Refined and Straits 21¼c., Banca 25c., all gold.

Our late advices announce that "the improvement noticed in our last issue has been partially lost under the influence of further arrivals of Australian slab, which have sold at from 90/ 6d. to 90/, both spot, landing and for arrival in fair quantity. Straits has commanded 93/ for a few parcels on the spot, but is now 20/ lower, and for arrival 91/ 6.

"At the Ticketing of Australian ores on Tuesday, 66 tons fine sold at £50 10/@£56 5/, 8 tons good at £38 10@£48 10/, and 4 tons inferior at £15 10/, 7 tons Peruvian Barilla at £37 10/@£45.

"Since the advance in English to 98/ for common ingot, the demand has been rather slack."

There is no change in the price of plates, which we quote as follows: I. C. charcoal $9 75; I. C. coke $7 75@$8 50; Terne $7.

Lead.—There has been very little business done in lead during the week. About 100 tons would cover the sales. The Government price is $6 35, and dealers ask $6 40@$6 45, ex store. Foreign scarce at 6¾c. gold. From London we learn that "ordinary English shipping brands sold at £22 12/ 6d. @22 15/, with a fair business doing."

Spelter and Zinc.—The Foreign market is firm, and likely to advance. We quote Domestic at 6¾c.@6¾c., currency, and Foreign, C. G. H., 7c.; Silesian Union, $6 90,; W. H. 7¼c., all go'd.

From London we learn:

"English delivered £24 10/ paid, and £23 5/ to £23 10/ spot and to arrive for Silesian, according to brand, £23@@23 15/."

Antimony.—The market is quiet. We quote 11¾c.@12c. gold. Cable news from London quotes Regulus of Antimony, French Star, f. o. b., £50 per ton, while our mail advices quote but £47@48, which would be a very heavy advance.

Manganese.—Virginia manganite, 2¾c., gold; New Brunswick manganite, 3c.; Georgia, 3½c.; Pyrolusite and crystalized manganite, none in the market. The New Brunswick manganese mines appear to be quite prolific, judging from entries at the Boston Custom House, as it is stated from 100 to 150 barrels are the weekly arrivals.

Quicksilver.—The price at San Francisco is quoted at $1 50. In London, it is quoted £24 per flask (75 lb.) The New York market is a very limited one, and it may be quoted at $1 60@1 65.

Miscellaneous Stocks.

NEW YORK, Nov. 30, 1874.

The following list, almost without exception, exhibits a very material advance, as compared with our last, the improvement having manifested itself during the operations of the last two days. The transactions for the same period have been more extensive than has been noticeable for a long time past. At the Philadelphia Board a noteworthy feature of yesterday's transactions was the transfer of some 12,500 shares of Lehigh Navigation at from $47¾ to $48, the general market closing firm at the quotations below. The transactions in the market have been somewhat limited; the quotations, however, remain firm, with an advancing tendency. Our quotations represent the actual selling prices yesterday at the closing of both Boards.

New Jersey Central R. R. Co	—	106¼
American Coal Co	—	62
Maryland Coal Co	—	19
Pennsylvania Coal Co	—	235
Quicksilver Mining Co. Preferred	—	37½
Reading R. R. Co	—	55
Delaware and Hudson Canal Co	—	116⅝
Lehigh Coal and Navigation Co	—	48
Lehigh Valley R. R. Co	—	61
Catawissa Preferred	—	42
Delaware, Lackawanna & West. R. R. Co.	—	109¼
Consolidated Coal Co	—	45¼
Little Schuylkill R. R.	—	47
Huntington & Broad Top R. R. prefrd.	—	21
St. Louis & Iron Mountain	—	—
Susquehanna Canal	—	—
Delaware Division Canal	—	51⅛

Boston Stock Market.

BOSTON, Nov. 5, 1874.

Copper Falls has declined $1 50 per share, as compared with our last report; the remaining portion of the list has advanced. The sales during the operations of the Board yesterday were comprised in several transfers of Quincy, ranging from $36¾ to $38 per share, and also slight transactions of Allouez at $6¾. The report is as follows:

Allouez	6¾	Pewabic	—
Calumet and Hecla Co.	134	Phœnix	—
Copper Falls	8	Quincy	38
Central	—	Ridge	5
Franklin	—	Rockland	—

* Ex-dividend.

San Francisco Stock Market.

BY TELEGRAPH.

NEW YORK, November 5, 1874.

Our report from the San Francisco Stock Board is dated the 3d inst. The list, with the exception of an advance of $6 per share in Consolidated Virginia and a slight rise in Gould and Curry, exhibits a marked decline. Overman is the most prominent feature in the report, having fallen to $53, a decline of $22 per share as compared with our last. In fact the general decline of the market will possibly average 10 per cent. throughout the list. We append the prices of the following stocks during the operations on the 2d inst.: Alpha, $14; Ophir, $60 and Pioche $5 per share. The report is as follows:

Savage	70	Raymond & Ely	16
Crown Point	56	Meadow Valley	6⅝
Yellow Jacket	91	Eureka G. V. Bid	8
Kentuck	15	Ophir	—
Chollar Potosi	57	Alpha	—
Gould & Curry	29	Consolidated Virginia	120
Belcher	58	Overman	—
Imperial	10⅞	Sierra Nevada	8½

American Institute of Mining Engineers.

OFFICIAL BULLETIN.

Announcements to Members and Associates.

I. The ENGINEERING AND MINING JOURNAL, which is the Organ of the Institute, and contains its proceedings, transactions and notices of meetings, will be sent to each Member and Associate on the payment of his annual dues. Back numbers cannot, as a rule, be sent.

II. Dues (ten dollars per annum) are payable on election and at the annual (May) meeting. Members and associates elected at the February meeting pay ten dollars only to May of the following year. Remittances should be made, as far as possible, by P. O. Order, payable to the Secretary.

III. The Council earnestly requests members to forward to the Secretary, for preservation, copies of all printed mining and geological reports, particularly pamphlets, which may fall in their way. It is believed that by this means a large amount of valuable fugitive information concerning different regions and properties in this country, may be caught and preserved.

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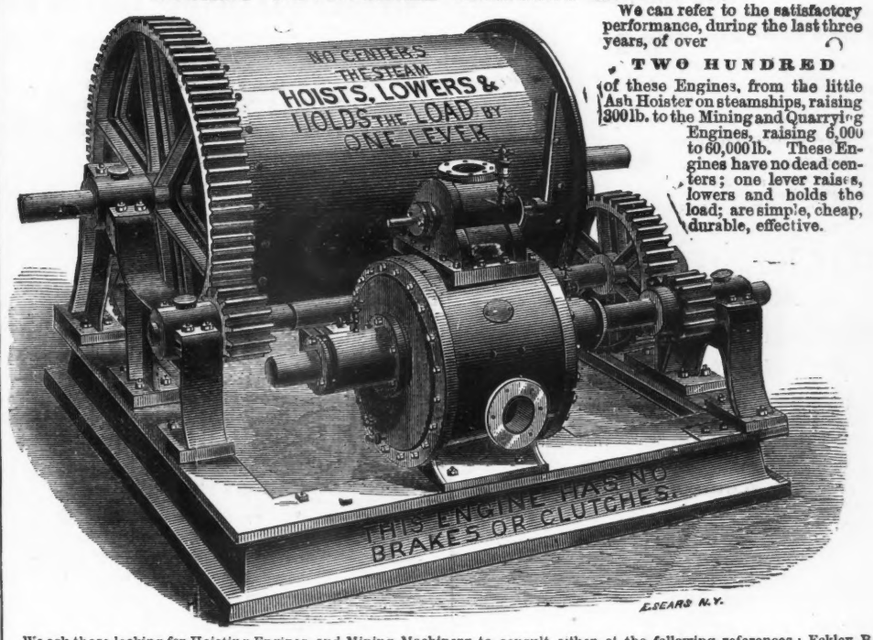

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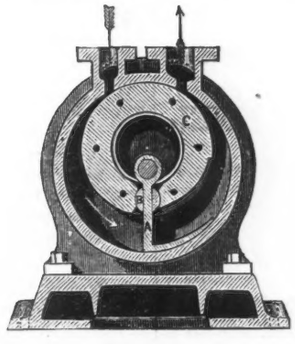

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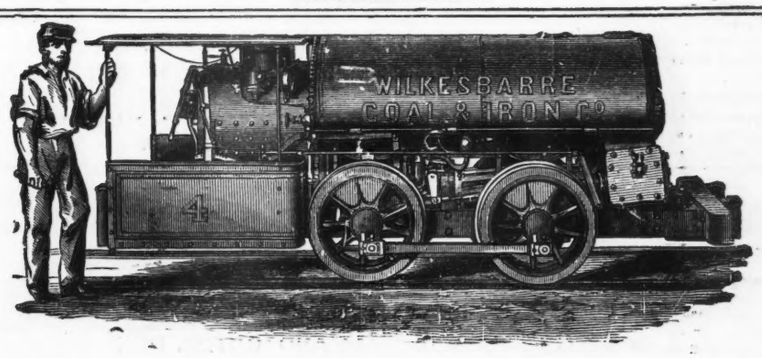

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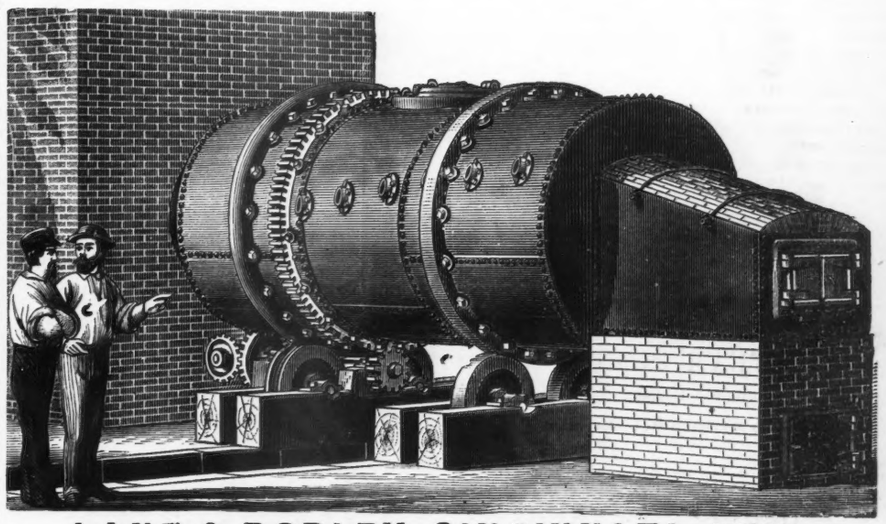

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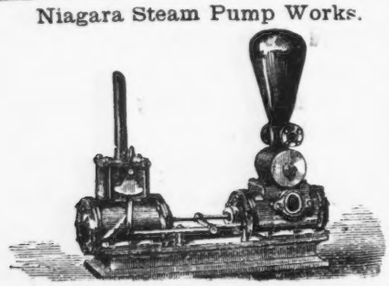

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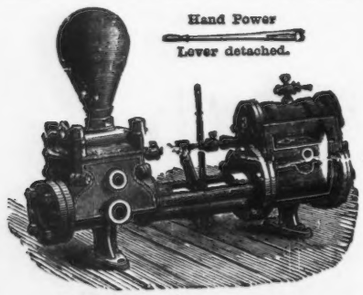

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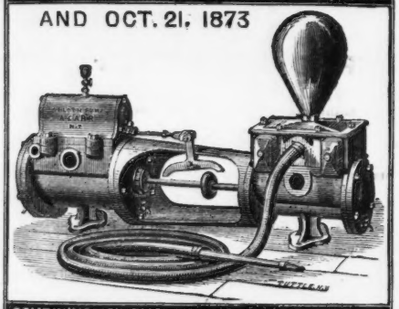

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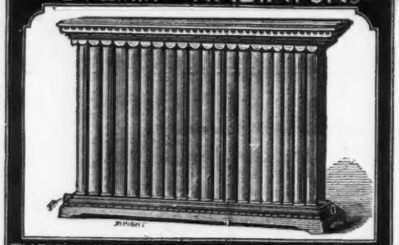

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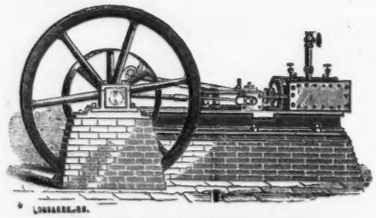

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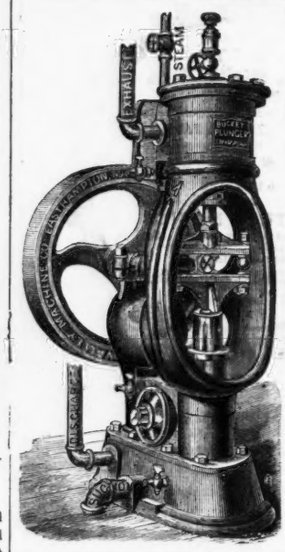

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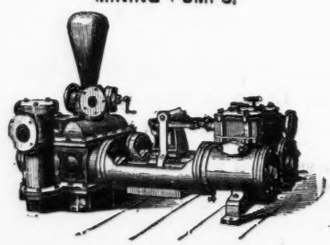

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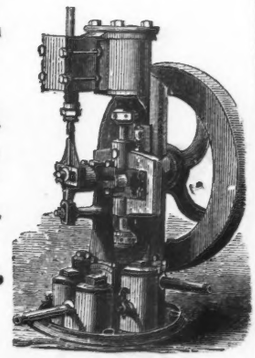

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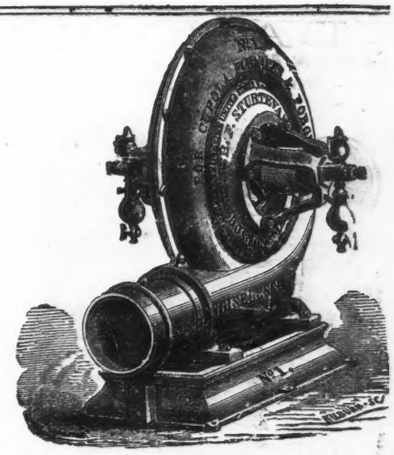

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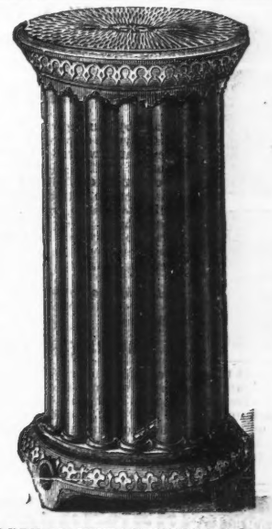

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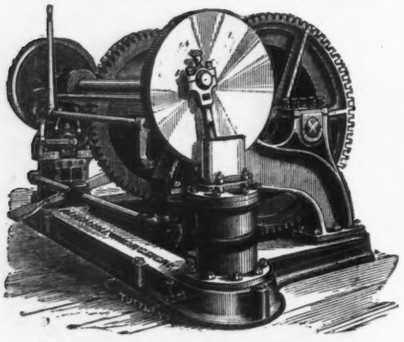

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☞ Look at following extract, Ingersoll Co.'s letter of excuses, ENGINEERING AND MINING JOURNAL, June 6, and compare with their advertisement: "I had *two* drills at the mine from the commencement, one beginning work on the 4th of April, the other on the 7th of the same month, and both drills working until the 1st of May." Signed, C. N. ELLIOTT, Superintendent Ingersoll Rock Drill Co.
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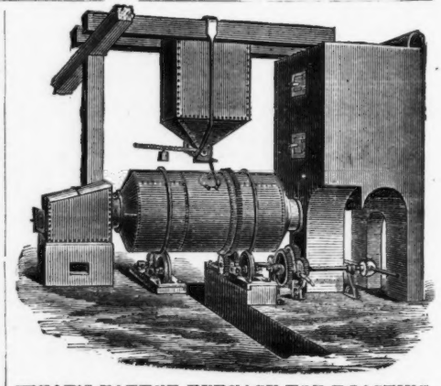

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